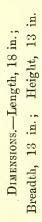
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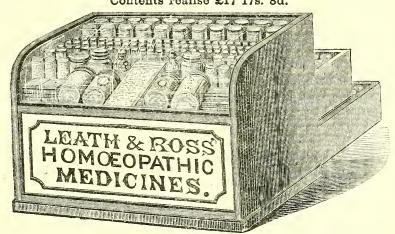
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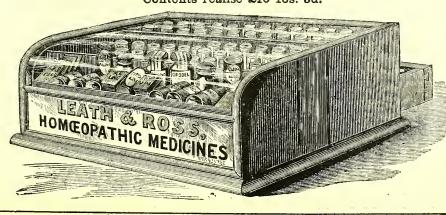
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WANTED, for India, an Assistant, having passed examinations as pharmacist, with thorough knowledge of compounding, dispensing, and conducting a chemist's business in all its branches; must have had good experience; a bachelor, of good appearance, of sober habits, and of undeniable character. Address, with photo, W., care of Baiss Brothers & Co., 4 Jewry Street, E.C.

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FORTHCOMING ELECTION OF MEMBERS OF THE PHARMACEUTICAL COUNCIL.

The following letter has been issued (by order of the Council) to the members of the Midland Counties Chemists' Association; and the votes of other Members and Associates of the Pharmaceutical Society are respectfully solicited on Mr. Southall's behalf:—

SIR,—I beg to inform you that Mr. W. J. CHURCHILL having intimated his intention of retiring from the PHARMA-CEUTICAL COUNCIL at the ELECTION, which will take place next month, this ASSOCIATION has prevailed upon MR. ALFRED SOUTHALL, F.C.S., of the firm of SOUTHALL BROS. & BARCLAY, to allow himself to be proposed as a Candidate for the vacant seat.

My Council are of opinion that it is very important that a large commercial centre like Birmingham should be directly represented on that Council, and as Mr. Alfred Southall has the entire confidence of this Association, I would ask you to support him with your vote and interest.

Yours faithfully,

CHARLES THOMPSON.

Hon. Secretary.

April, 1886.

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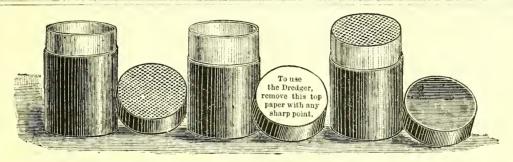
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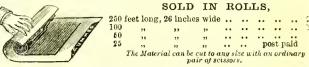
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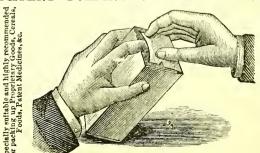
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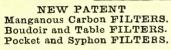
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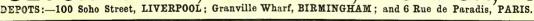


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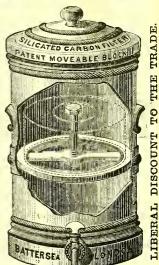
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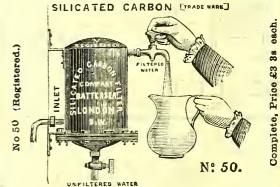
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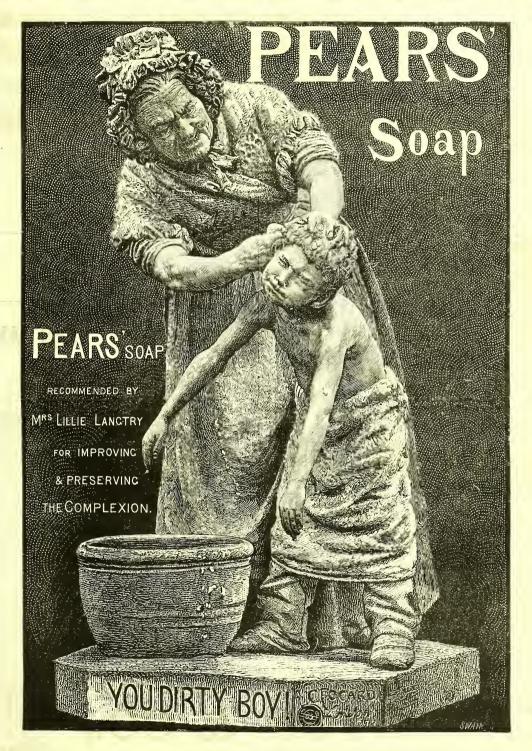


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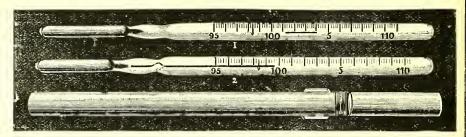
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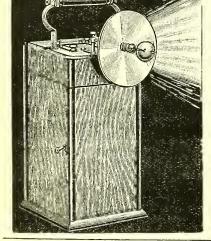
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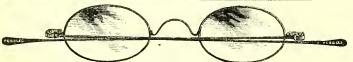
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Garrod's "Materia Medica," 8th edit.; B.P., 1874; Muter's "Chemistry," 1874; Muter's "Key to Materia Medica"; good condition; what eash offers? the lot 12. Dawson, 27 King Street, Sheffield.

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Bentley's "Botany"; Deschanel's "Natural
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Inorganie Chemistry," 2 vols.; Cassell's
"Family Physician," new; Paurmaceutical
Journal, 16 vols., well bound, 1841 to 1857;
Miller's "Organie Chemistry"; all good
condition. Holmes, Woodside Cottage,
Kendal.

Literature.

Chemist and Druggist, 1882, 1883, complete, 1884 (February and March missing), 1885 up to date, 1879 (November and Deeember), elean: what offers? Pharmaceutical Journal posted day of publication, commencing January 1, 1886; what offers? "Pharmaeist," 43 Tontine Street, Folkestone. Chemist and Druggist, odd numbers, from 1861, post free 9d. each; last 8 vols. complete, 4s. 6d. each. carriage free; Journal, odd, from 1872, 2½d. each, post free; Diary to 1883, 2s. 3d. each, free. Williams, Chemist, Coleford, Gloucester.

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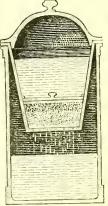
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For Testimonials and References see the full pag. Advertisement which appears monthly in this Journal.—Last insertion April 24, page 9.

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SEE INDEX. PAGES v—vii. PLEASE NOTE IMPORTANT ADDITIONS.*

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	100	Z. BOTTLES		DOZ. BO	TTLES
	contai	ning containing		containing	containing
	PIL	$^{100}_{ m LS}$ PHLS		$\frac{25}{\text{PILLS}}$	100 Phlhs
	1111	125 171115			
	.s. 7	$d_* = s - d_*$		s. d.	s. d.
Aconitine Crystals (Duquesnel's)1-500 gr.	7 7	0 24 0	Hydrastine (White Alkaloid) gr.	20 6 9 0	79 0 32 0
1-200 gr. Aloes Barb. B.P 5 gr.	5	0 24 0 0 16 0	Iodoform	11 0	39 6
Dilnte (Hall's Dinner)	5	0 16 0	Ipecac, Powdered	5 0	16 0
Socotrine, B.P gr.		0 36 0	, , , , j	5 0	16 0
and Asafertida, B.P	5 5	0 16 0 0 16 0	,, Comp. (Ipecae and Opiom)5 gr. ,, and Squill B P5 gr	9 0 5 0	32 0 16 0
and Wymb B.P	5	6 18 0	Iron Arseniate	5 6	18 0
	6	0 20 0	" Carbonate, B.P 5 gr.	5 6	18 0
Nux Vomier	6	0 20 0	Iron, Arseniate	5 0 7 0	16 0 24 0
5 Vioin	; 5	0 16 0 0 20 0	,, and Quinine Citrate	10 0	35 6
		0 24 0	, Quinine, and Strychnine	13 6	49 6
		0 39 6	Laxative Vegetable (Improved Cath)	5 6	18 0
Compound and Strychnine	7	0 24 0 0 24 0	Manganese, Bin-oxide	9 0 5 0	32 0 16 0
Strychnine and Belladonna	. 7	0 24 0	Proto Iodide 1 gr.	5 0	16 0
Anti-Cholera	7	0 24 0	, , , , , , , , , , , , , , , , , , ,	5 0	16 0
*Anti-Dyspepsia (Fothergill's)		0 24 0	Mercury, Bin-Iodide	7 0	24 0
Apirodisiae		0 59 6 0 16 0	Narcotic Extracts (Brown-Sequard)	9 0 15 0	32 0 55 6
Arsenious Acid	5	0 16 0	Nitro-Glycerin	7 0	24 0
Astrotida, U.S. 1-20 gr. Astrotida, U.S. 5 gr. Atropine 1-300 gr. 1-100 gr.	5	0 16 0	.,1-50 gr.	7 0	24 0
Compound, B.P 5 gr.	5	0 16 0	Opinm, Powdered	7 0	24 0
1.100 gr.	7 7	0 24 0 0 24 0	,, and Acetate of Lead. B.P	7 0	24 0 21 0
Blue Mass, B.P	1 5	0 16 0	", and Camphor Pepsin, Pure Concentrated	9 0	32 0
		0 16 0	Pho.phoras1-100 gr.	6 0	20 0
,, ,,3 gr.	5	0 16 0		6 0	20 0
., ,,	5 9	6 18 0 0 32 0	.,	8 0	20 0 28 0
Calcium Sulphide1-10 gr.	6	0 20 0	, and Iron	17 0	63 6
, 1 gr	6	0 20 0	and Nux Vomica	7 0	24 0
, ., <u>., gr</u> .	6	0 20 0	Nux Vomica and Iron	8 0 17 0	28 0 63 6
Calomel, Colocynth, and Hyoseyanus		0 20 0 0 32 0	,, and Quinine Quining, Iron, and Strychnine	17 0	63 6
" Comp. B P		6 18 0	and Valer, Zine	11 0	39 6
and Opinm		6 26 0	Pierotoxiu1-80 gr.	7 0	24 0
*Camplor and Hyosejamus ,, Mono-Bromated	5	6 18 0 0 39 6	Podophyilm gr.	5 0 5 0	16 0 16 0
*Cunabis Indica Extract	$\frac{11}{7}$	0 39 6 0 24 0	,,	5 6	18 0
*Cuscura Sagrada Expact 3 gr.	9	0 32 0	., Comp	8 0	28 0
*Cascara Sagrada Extract 3 gr.	7	0 24 0	Quinine, Bi-Sulphat	5 0	16 0 18 0
Cathartic Compound U.S.P	5 20	6 18 0 6 79 0	,, , , , , , , , , , , , , , , , , , ,	5 6 6 0	18 0 20 0
Colory ath Comp. B.P. 4 gr.	8	0 28 0	"	9 0	32 0
, , , , , , , , , , , , , , , , , , ,	9	0 32 0	.,	12 6	45 6
and Blue Mass	9	0 32 0	,, ,,4 gr.	16 6 20 6	61 6 75 0
., , and Calomel	9	0 32 0 0 33 0	,, 5 gr	20 6 5 6	18 0
., Extract, B.P	9	0 32 0	" " " " " " " " " " " " " " " " " " "	6 0	20 0
Canina Campound P.P. 5 am	c	0 16 0	,, ,,l gr.	6 6	22 0
Crotin Chloral 1 gr	5 11	6 18 0 0 39 6	., ,,	10 0 14 6	36 0 51 6
Corrosive Sublimate	5	0 16 0	, , ,	18 6	67 6
* ., ,,1-20 gr.	5	0 16 0	5 gr.	22 0	83 0
f ,,	. 5	0 16 0	Comp.	15 0	55 6
round (moral	10 17	0 36 0 0 63 6	Rhubarb Comp., B.P. 5 gr., and Blue Mass 5 gr. Bhibarb, Ipecae, and Soda Salicylic Acid 2 gr.	7 0	24 0 24 0
*Cubeb, Oleo-Resin, with Soda	7	0 24 0	Rhubarb, Ipecae, and Soda	7 0	24 0
Digitaliu 1-60 gr *Elaterine 1-20 gr Emunenagogne (Mutter's)	7	0 24 0	Salicylie Acid2 gr.	7 0	24 0
*Elaterine1-20 gr.	13	0 47 6	5 07	11 0	39 6
Ergotin	5 16	6 18 0 6 63 0	,, Comp.	16 6	29 0
Euonymin	16	0 59 0	Squill Comp., B.P	5 6	18 0
	20	6 79 0	Comp., B.P. 5 gr. Squill Comp., B.P. 5 gr. Squill Comp., B.P. 5 gr. Strycluine 1-50 gr. 3 gr	5 0	16 0
Compound.	16	0 59 0		7 0	24 0 32 0
Terruginous (Blaud's)	. 6	0 20 0 24 0	" Valerianate		32 0 30 0
The venutation of Colatina and 3	-	0 4 U	,, valertanate	, , ,	

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Brillautine Polishing Powder i BEESLEY & SONS Liebig's Iodized Cod Liver Oil ii BETHEL, THOS. —Paycel Post Boxes (Patent) 8 BLAKE & MACKENZIE — Printing ii BOWDEN, Y. II. —Reny's Great Indian Remedies 11
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JAMES, LIEUT
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_	MODELLE CO. D. HADMER W. HANDLE THE CO.	

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and Vichy)

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carbonate of Soda)
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AND SOLUBLE
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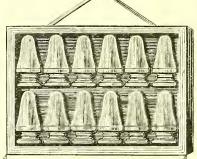
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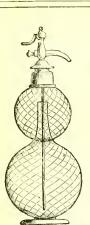
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THE ELECTION OF THE PHARMACEUTICAL COUNCIL.

Post-Card Competition.

We remind readers that we have offered one guinea for the nearest guess at the result of the forthcoming election for he Pharmaceutical Council, and that this competition is ppen until Tuesday next. The candidates are: — Messrs. C. B. Allen, H. B. Baildon, J. Borland, A. Bottle, W. G. Cross, P. P. Gostling, T. Greenish, J. Harrison, W. N. G. Lanee, J. Mackenzie, J. Maltby, W. V. Radley, W. D. Savage, A. Southall, G. F. Schacht, H. N. B. Spink, P. W. Squire, C. Symes, J. Williams, G. S. Woolley, J. R. Young. It will be necessary for guessers to present all the above in anticipated order, but he score of votes need not be given. Competitors for this orize must be subscribers or employés of subs ribers. As an ndication of the way we shall estimate the guessers, we may epeat that, other things being equal, we should consider that a man who guesses the first half correctly is better than the ne who guesses the last half correctly; and in the event of mything like equality in the accuracy of the guess we shall give the guinea to the guesser whose post-card reaches us Competitors will please not to write about any ther subject on the post-card which contains their prediction. Post-cards will be received for this competition up to Tuesday, May 11.

Referring to this competition one Edinburgh correspondent vrites: -- Some of our local guessers in the latest post-card ompetition do not, we hear, place very high in their lists the andidates for the Pharmaceutical Council who receive the special approval of the "agitators." This is from no lack of enthusiasm, but from a desire to win the guinea.

In the House of Commons on Thursday the Chancellor of the Exchequer, replying to Mr. B. Fletcher, said he had examined the question of the sale of what was called "herb beer" as a non-intoxicating beverage. The fact was that according to the law no beer could be brewed under the name of "herb beer" which had more than two degrees of alcohol, but the Inland Revenue did not interfere if it was under three degrees of proof spirit; that was to say, that they did not take notice of the fractions between two and three degrees of proof spirit. Of course, if these liquors were brewed stronger than that they practically became beer in the ordinary sense of the word, and ought to be so treated. Some of these drinks, called temperance drinks, had been found to be of considerably greater strength than London porter. (Laughter and Hear.) He found that it was a fact that these temperance drinks were popular in proportion to the number of degrees of proof spirit they contained. (Renewed laughter.) The consequence was that for the protection of the revenue it was impossible to allow drinks of this character to be treated as non-intoxicating if they contained more than three degrees of proof spirit. (Hear, hear.)

April has passed without a meeting of the Pharmaccutical Society's adherents in Scotland. This is the first year since the North British Branch was founded, in 1851, that no annual meeting has been held. The fact is significant. A meeting was held in March, but that was distinctly extraofficial.

At the pharmaceutical examinations last month 40 per cent of the Minor candidates in London passed, and in Edinburgh only 33 per cent, passed. The failures in the Preliminary amount to 52 per cent., nearly.

Professor Redwood will shortly commence a course of evening lectures on the pharmacy of the British Pharmacopreia, in connection with the Pharmaceutical Society's school, but the lectures will be open. This departure—which we understand has proceeded in the first instance from Dr. Redwood himself—is wise, for there has been some grumbling, since the professor resigned, that the School of Pharmacy was wanting in the education which justifies its title.

Pharmacists who have a voice in the election of candidates for the Commercial Travellers' School on May 28 are requested to consider the cases mentioned in our report of the Pharmaceutical Council meeting. Regarding the boy Kingsley, they should communicate with the secretary of the Pharmaceutical Society, and with Mr. Woolley regarding the case of Maria A. Taylor.

Under our French Correspondence will be found a report of the meeting of the Paris Pharmaceutical Society held on Wednesday last. We do not claim that there is anything wonderful in reporting a meeting two days after it is held, but we do assert that our report is published ten days or a fortnight before anything appears about the meeting in the French language.

The subject of the Cavendish lecture on June 4 will be "The study of symptoms caused by certain drugs." Mr. Jonathan Hutchinson, F.R.S., is to be the lecturer.

Liquor Carteighei—Anglice, "Solution of the Scotch Difficulty"—was one of the exhibits in a recent exhibition in Edinburgh. It was shown in a bottle which had formerly contained something which is not a patent medicine, and is either a solution of a simple drug or a water impregnated with mineral alkali or carbonic acid gas.

According to the *Lancet* the following members of Parliament are showing a great interest in the Charities Rating Exemption Bill:—Sir Julian Goldsmid, Sir Robert Fowler, Messrs. Ernest Baggallay, H. W. Lawson, O. V. Morgan, and Sir Algernon Borthwick.

* *

At the Lambeth Police Court on Thursday Hartmann Henry Sultzberger, an opium merchant, was charged with attempting to commit suicide on May 4. The prisoner had taken a large quantity of opium in consequence, it was said, of financial difficulties. His affairs were in bankruptcy, and the warrant against him was taken out by the Official Receiver of the Croydon Bankruptcy Court. After hearing medical and other evidence, the magistrate said it was a sad case, and remanded it, so that Mr. Sultzberger might be seen by the prison chaplain and the doctor.

* *

Edmund Stower, a lad in the service of Mr. William Thomas, chemist, Talbot Road, Notting Hill, was charged, on May 1, at Hammersmith with embezzlement. One case was gone into, from which it appeared that he received 1s. 3d. There was another charge against the accused of stealing a bottle of perfume, which was found upon him. Mr. Paget remanded the accused for the attendance of the witnesses in the other cases of embezzlement.

* *

The Sydney (N.S.W.) Technical College authorities have recently tried to steal a march on the Pharmaceutical Society, but so far with little success. A deputation from the Board of the College waited upon the Minister of Public Instruction, and tried to get him to allow the College to grant certificates under the Poisons Act of New South Wales. The reasons which the College gave for their request were that they had quarrelled with the Pharmaceutical Society, and that the fees charged by the Society are extortionate. The reply which the deputation received was, that the Pharmaceutical Society only could by law grant certificates, and the law would have to be altered before the College could get what they wanted.

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DIARY FOR NEXT WEEK.

Monday, May 10.—Society of Arts, 8 p.m. Dr. B. W. Richardson: "Animal Mechanics" (Cantor Lecture).

Tuesday, May 11.--Drysaltery Sales at the Commercial Sale Rooms, at 1 p.m.

Royal Institution of Great Britain, 3 p.m. Professor Arthur Gamgee, M.D., F.R.S.: "The Function of Circulation."

Society of Arts, 8 p.m. Mr. Ernest Hart: "Japanese Art Work."

Wednesday, May 12.—Royal Microscopical Society, 8 p.m. Dr. G. M. Sternberg: "Micrococcus Pasteuri" (Sternberg); Mr. F. H. Evans: "Photo-micrography by the Woodbury Type Process;" Mr. C. D. Ahrens: "New Polarising Prism."

Society of Arts, 8 p.m. Mr. J. W. Bund Willis-Bund; "The Proposed Fishery Board."

Spice Sales at the Commercial Sale Rooms, 1 p.m.

Thursday, May 13.—Drug Sales at the New Corn Exchange, at 10.30 p.m.

Parkes Museum of llygiene, 8 p.m. Mr. R. Warington: "Recent Investigations on Well Waters."

Royal Institution of Great Britain, 3 p.m. Professor Dewar: "The Alkaloids."

Society of Arts, 8 p.m. Professor R. Meldola: "The Scientific Development of the Coal Tar Colour Industry."

Friday, May 14.—Quekett Microscopical Club, 7.30 p.m. Exhibition of Micro-photographs with the Lantern, by Mr. F. H. Evans, in the Mathematical Theatre.

Royal Institution of Great Britain, 9 p.m. Professor John Millar Thomson: "Suspended Crystallisation."

Esturday, May 15.—Society of Atts, 3 p.m. Professor George Forbes: "Electricity."

A VOICE FROM THE PAST.

It is a long cry back from now to 1749; what was the drug trade then? was it free from cutting opposition, or advertising—that ungentlemanly departure of recent years! It would appear to have been not so. Then it was a struggle, as it is now, and the following extracts from *The Edinburgh Evening Courant* of September 14, 1749, may interest some who grumble at present hard times. The news sheet which we speak of is a modest thing of four pages, similar in size to this; three-eighths is occupied by advertisements, and the following constitute one-fourth of that space:—

JAMES SCOTT, CHYMIST AND DRUGGIST,

At the Scots Elaboratory Warehouse, at the back of the Cross, Edinburgh, has lately imported a large Assortment of Simple Drugs, all fresh and the best of their kinds: Where also may be had, at the most reasonable rates, Chymical and Galenical Medicines, faithfully prepared with the greatest Accuracy, agreeable to the Rules laid down by the Royal College of Physicians of Edinburgh, in their Dispensatory.-Compound Medicines, imported from abroad, are either prepared according to the Dispensatories of the Places they come from, or sophisticated by the Trading Chymists, in order to increase their Profits: These Abuses have often been complained of here, and in order to remedy such dangerous Frauds, several Years ago there was an Elaboratory erected in this City, wherein Chymical and Galenical Medicines have been prepared, to the general Satisfaction of the Physicians and Apothecaries of this City and Country: THAT ELABO-RATORY, being the only one in this Place, with all its Utensils, is now in Possession of the said James Scott, who carries on the preparing of Chymical and Galenical Medicines solely on his own Account.-At the said Warehouse may be had Piermont, Orange-flower, Hungary, Lavender, and Honey Waters, all warranted of the best sorts; also fine Oyl, and all the different Perfumes for Snuff.

N.B.—Commissions from the country shall be answered with the greatest Punctuality and Exactness.

Mr. Scott had evidently some strong opponent. These references to foreign physic, abuses and complaints, all indicate a rival in the field; and we do find such a rival in a younger chemist, who spells in the modern fashion, and has a characteristic sign. What could the "moving head" have been?

THAT GILBERT LOWRIE, junr., chemist and druggist, at the Laboratory Warehouse and Moving Head, First Stair below the Head of Niddery's Wynd, Edinburgh, has imported a large and fresh Assortment of Simple Drugs, of the best Kinds, which he sells in Wholesale and Retail, as low as these Articles, of equal Goodness, are had from London.

That he prepares all kinds of Chemical and Galenical Medicines, carefuly and honestly, by the Dispensatory of the Royal College of Physicians of Edinburgh, which are sold in his Warehouse at the lowest Rates. And it should be more attended to that Preparations brought from London or elsewhere abroad are not made by the Edinburgh Dispensatory, and often may prove hurtful to a Patient when substituted in place of Medicines bearing the same Name prescribed by a Physician here.

N.B.—At the said Gilbert Lowrie's Warehouse, Lavender, Bergamot, and other Perfumes for Snuffs are to be sold genuine, and at the lowest prices.

Commissions from the country will be punctually executed.

Peace to their ashes! The strife continues, and perhaps in the year of grace 2049 some one may unearth the three-panelled card, or bulky price list, sigh, even groan, and again write "The strife continues."

SIX parts of sulphur, six of white-lead, and one of borax, thoroughly mixed and wetted with strong sulphuric acid, make a strong cement for connecting ironwork.

Pharmaceutical Society of Great Britain.

COUNCIL MEETING.

THE last ordinary meeting of the present Council was held on Wednesday of this week. Present, President, Vice-President, Messrs. Allen, Bottle, Borland, Churchill, Gostling, Greenish, Hills, Savage, Schacht, Symes, and Woolley. Afterwards, during the discussion originated by Dr. Symes, Messrs. Hampson, Radley, and Williams came in, Mr. Squire arrived shortly after, and Mr. Butt dropped in at 1 o'clock.

The PRESIDENT called the meeting to order at 11.15, and the proceedings were commenced by the Secretary reading

the minutes of the previous meeting.

A COMPLAINT AGAINST THE OFFICE.

Before the minutes were adopted Dr. Symes asked the President if in last month's agenda there was a notice of the report of the Special Committee (Scotland); to which a negative reply was given. Dr. Symes then said that he considered it was unfortunate that it was so, because he had left the council room under the impression that all the business of importance was practically over. Had a notice of this special business appeared in the agenda-paper, as it should have done, he certainly would not have left at the time he did, and he was perfectly astonished to find a discussion reported in the Journal. But what he now wished to refer to chiefly was the fact that as soon as he read the report of the discussion he wished to refer to the agenda, but found that he had mislaid his copy. He therefore wrote to the Secretary asking a fresh one; to this he received a reply which stated that he could not be supplied with a copy of the agenda, because, according to standing orders, and by direction of the President, no fresh copies could be supplied to members. He was as onished to receive such a reply from the Secretary. He now felt that there might be other standing orders in existence which would help to defeat reasonable inquiry by members of Council, and wished to learn if there were auy others of the same kind. Regarding the Secretary's letter, he stated that he had frequently heard complaints of the discourtesy of the office officials, but this was the first time that he had experience of what he termed over-officialism. He wished that greater courtesy had been shown to him, and remarked that apparently the officials had the idea that the Society existed for the office, instead of the office for the Society

The President said that he was really responsible for this matter. The meeting of Committee at which the report was drawn up was held on the day before the Council meeting, and therefore the non-insertion of the business in the agenda was a slip, he feared. At the same time he stated that it was customary to bring up such matters as were decided upon in Tuesday Committees without such notice as

Dr. Symes desired.

Dr. SYMES said that he did not wish to charge the President with any neglect in the case. There were matters of detail which he would not trust to the President, who in conducting the Society's affairs had quite enough on his miud. But there ought to be a rule of the office that members of Council should get any information they desired. It was a hard thing that country members should take the trouble of electing those of their number who were willing to give their services to the Society, and whom they trusted, and that those members should not be trusted by the office. There was a large staff of clerks who might help to save the time of the members.

The President remarked that a written copy might have been sent, and the Secretary said that he would have done

so if he had thought it was important.

Mr. SCHACHT said that members should recollect that in this matter the Secretary had to act up to the standing orders, which forbade him to accede to Dr. Symes' request. Mr. GREENISH was of opinion that the conduct of the officials was uniformly courteous, and Mr. GOSTLING said that he would be sorry to sit at the table without protesting against the charge made by Dr. Symes against the Secretary. He wished to say that he had always received uniform courtesy from the office, and from Mr. Bremridge in particular. Dr. Symes said that he would be sorry to accept the Secre

tary's plea of unimportance, and Mr. BOTTLE felt that Dr. SYMES would have pursued a better course by consulting the President rather than publicly charging the officials with discourtesy. Mr. CHURCHILL suggested that new business should always be announced from the chair.

The minutes were then agreed to.

ELECTIONS AND RESTORATIONS.

A number of persons were then elected adherents of the Society, and Clara Brook Smith, 6 High Street, North Woolwich, was restored to the register of chemists and druggists on payment of a fine. Before the motion was formally adopted Mr. Churchill wished to catechise the Secretary on the matter, and while this process was going on the Council went into committee. On resuming the motion was agreed to. The following persons having made the necessary declarations, &c., were directed to be placed on the register:—W. Baker, New Hampton; W. Cullen, Govan Road, Govan; E. Gurnnall, Woolwich; J. M. McCowan, Paisley; R. T. McCowan, Paisley; and Clara Brook Smith, sen., North Woolwich.

AN EXPLANANTION.

Dr. SYMES now stated that the Secretary had handed to him the letter in which he made the request for a copy of the agenda; this he read, and it appeared that the letter also referred to a remittance of money by the writer. Still he did not think that this justified the Secretary's reply. Mr. HILLS and several others expressed opinions to the contrary, that the letter quite altered the complexion of the case, and ought to be published in justice to the Secretary.

The VICE-PRESIDENT said he had not spoken before because he thought that Dr. Symes had grounds for complaint. But he regretted, nevertheless, that the charge had been made, and expressed his high opinion of the uniform courtesy of the Secretary and his staff. Mr. WOOLLEY also expressed himself in similar terms, and the PRESIDENT said that he did not consider Dr. Symes's action good policy; before making a public statement regarding a permanent official, it was the custom to consult the President. The explanation which Dr. Symes now made did not wipe out what he had previously said, and he wished Dr. Symes to keep that in mind. Dr. Symes replied that he had on former occasions consulted the President, but thought it necessary in this case to take a different course.

The subject then dropped.

REPORTS OF COMMITTEES.

Various reports were read by the President. The FINANCE COMMITTEE reported that 1,500% of surplus income had in the month of April been invested in 2½-per-cents. In reply to Mr. Woolley, the PRESIDENT stated that all Benevolent Fund investments are made primarily in 3-per-cent. Consols. So far investments in ground-rents were satisfactory, and returns came in well. The BENEVOLENT FUND report showed that grants in aid amounting to 351, had been made. One case was not entertained, and another was held over for inquiry. In moving the adoption of the report, Mr. ATKINS wished to make an appeal to wholesale houses and those in the drug trade who are connected with the Commercial Travellers' Benevolent Association, on behalf of the Kingsley family in Peterborough. This family consists of six children, two of whom on a previous occasion were successful in getting iuto a hospital. A clergymau in the locality had taken great interest in one of the boys, and lately secured his nomination for the Commercial Travellers' school. To further his election ou May 28 a grant of 5l. was made, and it was now desired that votes should be given to him. Reference was also made to another case. Mr. RICHARDSON said that the Kingsley case was a most deserving one. The father had been in business and had occupied a good position in Leicester. The children had been brought up with care, and deserved all encouragement. Mr. WOOLLEY took occasion to make an appeal for votes on behalf of Maria Alice Taylor, Manchester, a candidate for the same school. She was the daughter of a chemist, and a grant had been given to the family. This case was also a deserving one. The report was unanimously adopted.

The report of the Laboratory and House Committee gave the usual particulars regarding the library, museum, and professors. Emeritu:-Professor Redwood proposed to give a course of lectures on practical pharmacy, and the Committee recommended the purchase of apparatus and specimens which might be required to illustrate them. The application by the LEEDS CHEMISTS' ASSOCIATION for a grant of 25½ for the purchase of books was acceded to, and the HERBARIUM PRIZE REGULATIONS were at last fin shed. Some other

matters were re-committed.

The PRESIDENT explained various parts of the report. Professor Redwood's lectures are to be on the pharmacy of the British Pharmacopæia, and are to be given in the evenings, so that they will be available for all adherents of the Society as well as students. These may be continued in the future, but this question is still under consideration. Mr. Schacht had a long conversation with the President regarding some criticism made by his partuer, Mr. White, on the herbarium regulations. The PRESIDENT said that the regulations as submitted would discourage the collection of rare specimens, and the tendency of collectors to acquire large numbers of specimens rather than typical specimens and accurate labelling. He explained that Mr. White's criticism had been responded to as far as possible, but it was easy for Mr. White to theorise, and not so easy for the Council to put the theory into practice. The Committee had recognised the bearing of the element of time in the matter, and had provided for it. Messrs. Borland, Churchill, Squire, and WILLIAMS also commented favourably on the new regulations. Dr. Symes was pleased that steps were at last being taken to have lectures on practical pharmacy in connection with the Society's school. The report was adopted.

THE LAW AND PARLIAMENTARY report dealt with the Privy Council's letter regarding nitro glycerine and Mr. Hampson's motion regarding the Medical Acts Amendment Bill and the British Pharmacopæia. As to the former, the Committee recommended that nitro-glycerine should be deemed to be a poison of Part I. of the Schedule; and that, owing to the altered character of the Medical Acts Amendment Bill, they did not think it advisable to take steps in the meantime regarding the British Pharmacopæia. A long discussion ensued regarding these two points. As to nitro-glycerine the PRE-SIDENT recounted the facts in the case so far as the Home Office and Privy Council are concerned, and Mr. Martindale's objections to nitro-glycerine tablets being placed on the Schedule. All clements in the case had been carefully considered by the Committee, and from various parts of the country the President had received strong evidence as to the dangerous nature of the medicine. Apart from all considerations as to the toxic nature of nitro-glycerine, he felt that it should be stated that the Council had no choice in this matter. It was within the power of the Home Office to prevent the sale of the drug in any form, and if the Council did not accede to the strongly expressed request of the Privy Council, it was possible that the Home Office might enforce the powers, which hitherto they had not done.

NITRO-GLYCERINE AS A POISON.

Remarks were then made on the Medical Bill, and from this point the tedium was agreeably relieved by speeches on nitro-glycerine and speeches on the Pharmacopæia. This was an excellent arrangement of unpremeditated eloquence, but not a happy one for an orderly report. The following is what was said regarding nitro glycerine. Mr. WILLIAMS was of opinion that it was a great mistake to put nitro-glycerine in Part I. of the Schedule; it was quite enough to put it in Part II., although he had his own opinion as to whether it should be deemed a poison at all. Mr. ATKINS made the same objection, and held that Part I. should be reserved for exceedingly potent remedies only. The value of the part was diminished by placing in it such articles, and he thought it sufficient for the safety of the public that it should be placed in Part II. Mr. ROBBINS pointed out that there was no use talking about the matter now. In the Council's first recommendation, nitro-glycerine was placed in Part I., and they could not go back upon that. Mr. RICHARDSON entirely agreed with the Committee's recommendation, for he knew that the tablets were most dangerous, and the authorities should be assisted in tracing the sale of such articles.

PHARMACISTS AND THE PHARMACOPŒIA.

Regarding the Pharmacopœia the President gave a short description of the origin of the Medical Bill and of its provisions. It was an arranged Bill, and all debatable matter

had been taken out of it, so that in parliamentary circles it was nuderstood that it would not be opposed. In view of these circumstances the Committee felt that it would be nnwise to introduce extraneous matter. Moreover, he had had an indication that their object would be accomplished independently of parliamentary measures. Mr. HAMPSON objected to the recommendation. He held that the Bill afforded ar excellent opportunity of influencing members of Parliament, and educating them into the claims of pharmacists regarding the Pharmacopæia. Dr. Symes was of the same opinion, and pointed out that no pharmaceutical legislation would take in the Pharmacopæia, and, if Medical Bills were not taken advantage of, pharmacists would have no channel for their claims. He strongly advocated that the opportunity should not be lost. A clause could easily be inserted dealing with the question without imperilling the safety of the Bill. Mr. WILLIAMS, on the other hand, held that the time was quite inopportune, and Mr. SCHACHT was of the same opinion; he took occasion to congratulate "his professional friends" on the prospects of the Bill and the accomplishment of their desires. The introduction of such foreign matter as the British Pharmacopæia would cause irritation amongst medical men, which was not desirable. Mr. HAMPSON thought there was no eause for irritation, and pointed out that the facts stated by the previous speaker in reference to the prospects of the Bill went to prove his case, that now was the time to move in the matter. Mr. ATKINS agreed that education of medical men and members of Parliament in this matter was wanted, but the question was whether it was desirable to force that education in season and out of season, and Messrs. RICHARDSON and HILLS supported the Committee's recommendation; but Mr. CHURCHILL, who followed, advocated the Parnellite method of procedure as being the only one which was likely to give pharmacists a hand in the compilation of the Pharmacopæia. To all this the PRE-SIDENT replied that he was as ardent as any of the speakers as to their claims regarding the Pharmacopæia, but he had it from high parliamentary authority that this was not the time to push their elaims-all debatable points had been removed from the Bill, and it would pass as a matter of course. After further reference to probable parliamentary assistance, he said that the Pharmaceutical Society could not afford to go forward at this time without some hope of success, and he regretted that there was no hope of that cordial assistance from M.P.'s which it was necessary to have. He was of opinion that they could get all they wanted without troubling Parliament. It was in the power of the Medical Council to accede to their demands, and the new provisions for the re-constitution of that body might pave the way for a settlement of the question. A vote was then taken, and in spite of all the talk, Mr. Hampson was the only one who voted against the Committee's recommendation. A motion regarding nitro-glycerine was then submitted and agreed to without comment.

SCOTTISH AFFAIRS.

The report of the Special Committee (Scotland) was then submitted, in addition to a formal reply to Mr. Baildon, drafted for the Assistant-Secretary by the Committee, and which appeared to limit the use of the Society's premises in Edinburgh to meetings not of a pharmaceutico-political nature. The report referred to matters in connection with the Edinburgh house, such as the Council of the North British Branch used to look after. In moving the adoption of the report, the PRESIDENT said that he thought it proper that no further allusion than what had been made at last meeting should be made by him in reference to the Scotch difficulty, and the report was adopted in silence.

REPORTS OF EXAMINATIONS.

Board of Examiners for England and Wales results for April:—

15 Major examined, 9 passed and 6 failed 190 Minor ,, 77 ,, ,, 113 ,,

Board of Examiners for Scotland:-

1 Major examined and passed

1 Modified ,, ,, failed 64 Minors ,, 21 passed and 43 failed.

Preliminary examination, 409 candidates examined, and of these 197 passed.

The rest of the business was taken in committee.

Probincial Reports.

BIRMINGHAM.

Mr. WILLIAM JONES (Morris, Banks & Co., ehemists), Bull Ring, has been elected people's warden at the annual Easter vestry meeting of the parish church. Mr. Jones was also appointed one of the representatives on the Lay and Clerical Council. Mr. Charles Mantell, ehemist, Cregoe Street, was elected as one of the sidesmen for the ensuing year in connection with St. Thomas's Church.

Dr. Bostock Hill has been appointed Medical Officer of Health and Borough Analyst to the newly-made borough of Sutton Coldfield, at a salary of 62*l*. 10*s*. per annum.

The fixtures, stock, &c., of Mr. Joseph Guest Earp, who has been adjudicated a bankrupt in the Birmingham County Court, were sold by public auction on Wednesday, April 28, by Messrs. Edwards, Son & Bigwood, by order of the trustee. It is reported that the goods went marvellously cheap.

A new Pathological Laboratory and Materia Medica Museum and Laboratory, in connection with the Queen's College, Paradise Street, Birmingham, were opened on Monday by the Warden, the Rev. W. H. Poulton. The museum is supplied with every official drug in the Pharmacopæia; and in the laboratory, besides the ordinary arrangements for pathological work, apparatus has been provided for the study of bacilli.

BOLTON.

A SINGULAR adventure happened to two Bolton children last week. On Thursday afternoon, as Mr. John Moscrop, of Messrs. T. Moscrop & Co., drysalters, was passing through All Saints' churchyard, after inspecting some alterations which have just been made on his firm's premises, he heard feeble moanings, and after some time he discovered that the sound proceeded from a closet in the corner of the churchyard. On opening the closet Mr. Moscrop found two children lying in an exhausted state, and lost no time in having them properly cared for. It afterwards transpired that the children—who were 2½ and 3 years of age—had been missing for two days. When they were somewhat restored they stated that a man had taken them away and put them in the closet. Had Mr. Moscrop not happened to pass through the churchyard at the time he did a more serious result would probably have happened.

LIVERPOOL.

WE are in a great state of excitement about the International Exhibition of Navigation, &c.—locally termed "The Shipperies"—which is to be opened by the Queen on Tuesday next. Her Majesty further favours her faithful and well-beloved Liverpudlians by staying until Thursday amongst us and making a long progress through various parts of the city. Such a thing has never before been known in the lives of many of us.

The trade has been specially honoured in the matter of this exhibition, as the application-forms for season tickets are to be had of every elemist in the city, and they are the only tradesmen thus (as a body) distinguished. "There's life in the old dog yet!"

Mr. Gabites, of Upper Warwick Street, known locally as the proprietor of some pills which cure everything you ever have had, and send you off for a month's holiday into the bargain, is opening a shop in the basement of a fine new block of offices in North John Street. We also hear that a druggist has erept in amongst the happy band who are to gather honey all the day as tenants of the shops under the new Laneashire and Yorkshire Railway station. The latter should be a very good stand. Who's the happy man?

LEWIS'S "IN EXCELSIS."—They've been and gone and got the *Great Eastern* steamship to lie at anchor in the river during the term of the exhibition and serve as a gigantic refreshment-room. No doubt you would be able, if you tried hard, to buy a pair of the wonderful boots, or even a 3s. 6d. patent, on the cheap, whilst on board. Oh, imper al Cæsar!

thou art indeed dead and turned to elay when [Lewis's tow thee about as a grogshop and cheap-Jack store!

One of our oldest and most-respected chemists, Mr. Charles Jones, Woodside, Birkenhead, died suddenly from, it is thought, heart-disease, whilst attending service at St. Mary's Church last Sunday morning. Quiet and reserved in manner, yet a warm friend, a good, kind master, a gentleman, and a man of business, there are many of us who could have been much better spared.

MANCHESTER.

ALLEGED MANSLAUGHTER BY A DOCTOR.—At the Manchester City Police Court on Saturday last, before Mr. R. A. Armitage and other magistrates, John William Irvine, a physician and surgeon, of Bradford, was charged with causing the death of Annie Darling, wife of Fred. Darling, labourer, by administering opium to her on March 10. At the time mentioned prisoner was an assistant to Mr. Pitman, surgeon, of Ashton New Road, Bradford, and had prescribed for the deceased, who died after taking the medicine. The Bench remanded prisoner until Thursday. They offered to accept bail in two surcties of 100% each. It will be remembered that the defendant was committed for trial (The Chemist and Druggist, April 3, p. 272) on this and another charge of a similar nature by a coroner's jury, and that on the other charge he was committed for trial at the Assizes. The Public Prosecutor has since taken up the case, and instituted the present proceedings.

SCOTLAND. EDINBURGH.

A Colossal Crystal.—An important contribution to the chemical department of the Edinburgh International Exhibition has been made in the form of a crystal of alum, by Peter Spenee & Sons, of the Manchester and Goole Alum-works. This crystal is the largest ever produced, weighing over eight tons, and took over a week to move across the exhibition-floor to its site in the Chemical Court. A party of pharmaceutical assistants and apprentices is being organised by Mr. Thomas Stephenson for the purpose of visiting the Industrials and inspecting the chemical and pharmaceutical exhibits during some of the quieter hours. The proposal deserves to be a success, and will no doubt be so.

Amongst the registered medical practitioners who have reeeived the degree of M.D. from the University of St. Andrew's is Mr. Alexander Gunn, who for several years acted as dispenser to the Royal Infirmary here, and still keeps an open drug-shop in the city.

Mr. D. M'Alpine, F.C.S., who for several years was lecturer in botany at the Watt Institute here, and went out to Australia eighteen months ago, is now located in Melbourne, and is lecturing there very successfully. He has recently arranged to deliver a course of lectures on botany to pharmaceutical students at the College of Pharmacy.

GLASGOW.

As is well known in the trade, the usual sequence to passing the Minor examination is a desire to get into business and so be one's own master; but it is generally felt here that every district is already overdone with chemists, not to speak of the innumerable surgeries, medical halls, and dispensaries. If, therefore, all the predicted new starts take place at the ensuing term, it is feared it will bring disaster to many. Mr. M'Innes, at present assistant to Mr. Dickie Cresshill, will shortly open a new shop in Pollokshields; and Mr. George Garry, chemist, Dumbarton Road, will shortly open a new shop in New City Road. Mr. Gordon opened his new shop in Partick on Saturday last. The shop, which has been fitted with the York Glass Company's phototype bottles, has a very neat and compact appearance.

One of our local firms of cutting grocers has during the past week raised the price of nearly all patent and proprietary articles. The 1s. $1\frac{1}{2}d$. patents are raised $\frac{1}{4}d$. all round. Some diversity of opinion exists regarding their reasons for so doing, but there are none more feasible than that they were selling many of them without any profit, which the trade will easily understand when they know that for some time past $8\frac{1}{2}d$, and 9d, have been their prices for all 1s, $1\frac{1}{2}d$.

Supper and Presentation.—Mr. Gordon, for some years assistant to Messrs. Brown Bros. & Co., Trongate, was, on the evening of Wednesday, April 28, entertained to supper in Ancell's Restaurant, Glassford Street, by his late masters and their employés, on the occasion of his leaving them to commence business in Partick. Mr. T. Brodie, managing partner, occupied the chair. Mr. Lees, manager of the retail department, officiated as croupier. The chairman, after proposing "The Health of Mr. Gordon," presented to him four volumes of books for his laboratory, and three books of poems for his leisure hours, in remembrance of his former masters and brother-employés. The business books selected were the "New British Pharmacopecia," Martindale's "Extra Pharmacopecia," Parrish's "Dispensatory," and Squire's "Companion to the British Pharmacopecia," new edition (to follow).

FRENCH CORRESPONDENCE.

(From our Special Correspondent.)

M. BAYER.—On Monday last M. Bayer of Munich, the discoverer of artificial indigo, was elected a member of the Academie des Sciences. He obtained 41 votes from 47 voters. Eleven other candidates of different nationalities were proposed.

MEDALS OF HONOUR TO PHARMACISTS.—A gold medal of the second class has just been awarded to M. Guérin, the pharmacist-in-chief of the Toulon hospitals, and a silver medal of the first class to M. Bonnic, an *interne* pharmacist of the Bon-rencontre hospital, for their services during the cholera epidemic of 1885.

Hydrophobia Statistics of Paris.—According to the official report presented by the Seine Board of Health the following are the statistics for the year 1885:—In all 518 animals were found to be suffering from rabies, namely, 503 dogs, 13 cats, and 2 horses. There were 527 suspicious cases, consisting of 513 dogs, 13 cats, and 1 goat. The number of bites by animals not proved to be hydrophobic was 655, and those by animals actually proved to behydrophobic amounted to 64; of these 19 were fatal to the persons bitten. The report shows a great increase in the number of rabies cases over 1884, namely, 518 in 1885, against 301 in the preceding year.

Professor Chatin's Lectures.—The Easter vacations having come to an end, it was reported the Professor would resume his lectures on May 4, the customary day. Many came to attend, with various intentions, it may be presumed, but all were disappointed. The only ones who appeared happy were the two préparateurs. These are young men, members of the class, who, in return for some slight privileges and a very moderate compensation, have the duty of preparing cach lecture, selecting the specimens, charts, &c., and assisting the professor during his demonstrations. As they stand by his side, and in the late occurrences got hit more than once by the projectiles, no one will wonder at their evident satisfaction has not been accepted.

MONTHLY MEETING OF THE PARIS PHARMACEUTICAL SOCIETY.—The regular meeting was held on May 5, with President Prunier and Secretary Planchon in their seats, in the presence of about forty members. M. de Vrij, a corre-

sponding member, attended the meeting and took part in the discussions.

M. Vigier made some remarks respecting extract of cinchona. He recommended the addition of hydrochloric acid to the menstruum, and subsequently that of citric acid, to ensure the continued solubility of the alkaloids after evaporation.

M. Ferrand spoke of saccharine, the new sweetening chemical, regretting at the same time that so confusing a name should have been applied to a product bearing no relation to sugar. Having given a brief history of the substance in question, he described some of his experiments with it. He found its solubility in water to be 241 milligrams in 100 c.c. at 15° C. When a warm solution is allowed to cool down, crystals are deposited, but these were observed to present two different types, a proof that the product is either a complex or an impure one—the specimen was not large enough to determine which. Another interesting fact noticed was that succharine, after being boiled with dilute sulphuric acid, acquires the property of reducing Fehling's solution. The taste of the substance, he observed, is not exactly the same as that of sugar, it having a sort of saline and cooling flavour. Yet it possesses great sweetening power, and, as an illustration, a solution of 1 in 10,000 parts of water was handed around to be tasted.

Messrs. Thuilier, Burgoin, Planchon, and Petit, next gave accounts of their trip to Montdidier during the Parmentier celebration. The first of these gentlemen was delegated by the Minister of War, and represented military pharmacy. The second represented the college, the third the Pharmaceutical Society, and the fourth the Benevolent Association of Pharmaceists. Each read from a printed slip the speech he had delivered at Montdidier, and was duly applanded.

M. de Vrij, being requested to speak, said that pure sulphate of quinine cannot be made in light crystals, such as are required by commerce. All the commercial specimens contain some 10 per cent. of cinchonidine, without which the crystals

are heavy, and no one will buy them.

Being asked what he considered the best assaying process for the presence of cinchonidine, he answered that there are two, one an absolute one, namely, the tartrate process described in books; and a relative one, which is as follows:—Dissolve 5 grams of the sample in 12 c.c. of normal sulphuric acid; take the tarc of the capsule, and evaporate till a pellicule forms: allow to cool, replace the water evaporated, and drain the crystals on a filter; in all the commercial specimens you will find cinchonidinc.

M. Bourgoin having asked him whether Pelletier had obtained pure quinine, M. de Vrij answered that he had not. He had been personally acquainted with Pelletier, had in his possession samples supplied by Pelletier himself, as well as some of the same bark which the discoverer of quinine had experimented with, and in both the chemical and the bark M. de Vrij had detected einchonidine in notable proportions.

M. Petit thought recrystallisation was all that is necessary to obtain pure quinine: he was convinced of it by his experiments while determining the rotatory power of quinine. He had thus obtained higher figures than can possibly be observed otherwise. He had in the course of manipulation dried his sulphate at a temperature of 120° C.

Then, said M. de Vrij, the high numbers are explained, for heating to 120° is sufficient to increase the rotatory power of quinine. At the same time, the Dutch scientist did not deny the reliability of recrystallisation for purifying quinine sulphate. He only insisted on the fact that acid sulphate of quinine cannot be impure, while the basic sulphate cannot be pure. He also agreed with another member on the excellent results afforded by the tartrate process of assaying, and took occasion to repeat that the herapathite method, which he had himself recommended once, is erroneous. This is due to the fact that when cinchonidine and quinine sulphate are crystallised together they form a double molecule that cannot be separated by any process short of redissolution and precipitation.

Many thanks were tendered to M. de Vrij, who afterwards mentioned that he was now seventy years of age, and when he attended the meeting last in the old college building he did not expect to have the happiness to meet them again.

A vote was then taken for a new member to be elected at this meeting. The choice fell on M. Boquillon, after which the Society adjourned.

THE COLONIAL AND INDIAN EXHIBITION.

(First Report.)

QUICK run through the Exhibition when Commissioners A and their allies were working at high-pressure speed in preparation for the advent of Royalty may not have been the most favourable circumstances in which to gather some idea of what of interest to the pharmacist the exhibition affords. Naturally we expect much from this "big show." India and our Colonies have rich flore; they furnish us with many important drugs, and we know from the experience gained by the Edinburgh Forestry Exhibition that our Indian and Colonial friends can come out strong in the drug line. But when one walks up the Central Indian Court and examines the delicate and picturesque wood structures, and the show of bright fabrics, jewellery, and other fine work of metal artificers, carved woodwork, and much else that will please the eye of the general observer, the first impression is that, saving a case in the Mysore section, in which are shown some excellent work in horn, including combs which would compare with the best of British manufacture, there is little that will directly interest the drug trade. But first impressions are not always correct, and they are not so in this case; for, after walking through the whole of the sections, we are struck with the variety and the extent of the drug exhibits While we write many of these are still in a backward condition. Commissioners, wisely, no doubt, have confined their efforts to make an effective show of manufactured goods, and such as may please the eye. Consequently, in some sections drugs are only partially unpacked, and many of those which have been eased are unlabelled. In a few days, however, all will be trim and neat, and the student of materia medica will have ample opportunity of satisfying his curiosity. Our purpose in this preliminary article is to give an indication of what is to be seen. Later on we shall enter more into detail regarding important exhibits.

INDIA.

First of the British dependencies in order of importance, and first in richness of flora, India promises to take in this exhibition high rank in medicinal exhibits. At present the Commercial and Economic Court is in a backward state (it is not in the Royal route); but the trophy of the Forest Department —consisting of a magnificent triumphal arch constructed of many varieties of timber-is complete. This is worth close inspection. Passing through it towards the left, we come to three native shops. In the first, devoted to staple food stuffs. a lifelike but inanimate shopkeeper is weighing lentils for a coolie, who appears to require a more substantial meal. Next we have a fruit shop, and then a booth devoted to physic. Here sits a grave-looking, high and heavy browed medicine-man, noticeable also for the prominence of his upper incisors. His physic is all around him, ehiefly in the bags in which the drugs have been brought to this countrynuts, barks, leaves, and fruits "arranged" entirely destitute of order. The same remark may almost be made of the general drug exhibit. At present the greater part of it is unpacked. What has seen the light of day is principally cinchona and tanning barks, but at present they are unarranged and unlabelled. Several scores of glazed boxes containing drugs have been placed on the walls, and many more will by-and-by be fixed up to complete what no doubt will be the most extensive collection in the exhibition.

CEYLON.

This enterprising dependency has come forward in splendid style. Apart from manufactured goods, there is a large space devoted to natural products, of which drugs form no small part. This department has the advantage of Dr. Trimen's personal supervision. His warm enthusiasm in the development of agricultural enterprise in Ceylon, and his work in experimental cultivation in the Perideniya Gardens, are sufficient proof that the exhibit will be one of unusual interest. Pharmacists will be interested chiefly in the einchona exhibits. It should be noted that the best days of einchona cultivation in Ceylon are now past. At one time agriculturists there gave all their energies and sunk nearly all their capital in the production of bark, and they succeeded so well (as they do in everything they try) that their supplies soon flooded the market and brought down prices with a

rattle. Now cinchona cultivation by itself does not pay, although it is an important auxiliary. It is surprising and gratifying, therefore, to observe that bark gets a foremost place in the Ceylon Court. We wish to call attention particularly to the cinchona trophy, an erection of colossal proportions made up of stems, with magnificent quill bark in the recesses. These come from different estates; amongst them the Stair estate contributes some excellent examples of renewed and natural bark. One C. succirubra stem with renewed bark struck us as being particularly worthy of inspection. This stem has a circumference of 30 inches or more at the thickest part. Many of the stems show one half of the circumference with the original, and the other half with renewed, bark. This applies to *C. officinalis*, several hydrids, and *C. Ledgeriana*, as well as to *C. succirubra*. On the second tier, and somewhat out of sight, is an excellent specimen of *C. Ledgeriana* stem, grown on St. Andrew's estate. This has a very thick bark, though only eight years old, and yields 12 per cent. of quinine sulphate. What will please the pharmacist most about this trophy is the fact that he is enabled, owing to the size of the specimens, to detect without doubt the external characteristics of the various kin Is of cinchona, such as are lost by the time the bark in a broken state comes into his hands. Several weeks ago some fine druggists' quill from Java appeared in Mincing Lane. This was from 3 to 4 feet long. Java may hide her head, for Ceylon comes forward here with quills 7 feet long! and in diameter from the slender quill of an inch to that of 6 or 8 inches, carefully sewed and packed with chips to keep it unbroken in transit. Bark of all conditions of harvesting will be shown, and no means will be omitted which may help to acquaint the non-professional mind with what einchona cultivation is.

Cardamoms are perhaps the next drug in importance to cinchona so far as the Ceylon planter is concerned. It is him we have to thank for cheap supplies of this useful and favourite carminative. Before Ceylon cardamoms began to come into our markets a few years ago, 12s. 6d. per lb. was a common price, now they are less than a fourth of that value. Still they continue to be produced largely in Ceylon, and excellent specimens are sent for exhibition. Latterly planters have turned their attention to croton-seed cultivation, and sufficient seed has been sent to the exhibition as would furnish a year's supply of oil for Great Britain. But it is not for physic that the oil is intended; there is a talk that it forms an excellent lubricant—for machinery, not for the human skin—and in hopes that it will be so used the seed is being harvested in large quantity. Vanilla cultivation has also been tried, and some fairly good "pods" are shown. One planter has recently turned his attention to annatto, and sends an excellent series of specimens, from the flowers and fruit preserved in spirit to the finished annatto, made up in circular cakes weighing about 2 lbs. The product is of excellent quality so far as we could judge by physical appearance. We shall watch the development of this little industry with interest, for at present we are dependent for our supplies mainly on non-British and not very reliable sources. Nutmegs, mace, saffron, wild-pig lard, cocoa-nut oil, eitronella, lemon-grass, cinnamon, and many other essential and fixed oils are shown, as well as several hundreds of less-known drugs, all of which are in a forward condition for inspection. Tobacco cultivation, though still in its infancy, appears to be a success if we may judge from the specimens which are shown, and Ceylon tea, it is well known, bids fair to outdo Chinese and Indian teas. Of this there is an excellent exhibit, and we would draw attention particularly to the three artistic satin-wood cases-native made, as are all the satin-wood cases shown in the court. But we shall return to this court another day, for we are convinced that it will be, to pharmacists at least, one of the most attractive in the exhibition. Passing on to the

WEST AFRICAN COLONIES,

we find that Gambia, as at the Forestry Exhibition, again comes out well with wax and rubber, and bottles of the bright scarlet jequirity seeds relieve these rather unattractive lots. Lagos has also a fair show, though not large.

CAPE COLONY.

The Cape of Good Hope Court is very far forward, and contains several excellent exhibits of drugs. Mr. W. J.

Bryers, of Ourust River, sends some well-preserved specimens of herbs and fruits, amongst them *Lantana Salviaefora* (Spanish Boseh), *Hyananche globosa*, *Myrica cordifolia*, and several others deserve notice. A new stone (crocodolite) applicable for ornaments is prominent here.

OUR AUSTRALASIAN COLONIES

have come out strongly in the exhibition, and promise to rival India in general attractiveness. The various Commissioners, not content with giving us telling representations of Antipodean pursuits, have brought living specimens of flora to brighten up their courts. The arbour and fernery, which has been constructed under the superintendence of the Commissioner for Vietoria (Mr. Joseph Bosisto), is a most attractive spectacle, and gives us more than a glimpse into the richness of the Vietorian fern-world. Unquestionably the fernery will do much in conveying to the multitude an idea that the gum-tree and the kangaroo are not the only living things which are particularly characteristic of Australia. The representation of the forest and its fauna, as well as the primitive human inhabitants, also help to make the Australian Courts prominent in the exhibition. Necessarily, the labours of the organisers of this part of the show have been expended in pushing forward these leading features, and that may account for lack of medicinal products. But we do not expect much of Australasia in this respect, because she has little to give. In the NEW ZEALAND Section there are several cases of kauri gum, made into various ornaments, and as found, a number of well-preserved herbarium specimens, and a large lot of star antimony. Messrs. J. & T. Mason, of Auckland, have a large case of perfumery and toilet preparations, of which we shall have something to say on a future occasion.

CANADA.

As we hasten through the Canadian Court stoves and other ironwork, woodwork, preserved fruits, and many other articles of common use and eonsumption are passed, but we cannot fail to notice the cases of Evans, Sons & Mason, W. Saunders & Co., and Lyman Brothers, all of which are devoted to pharmaceutical preparations, and the Imperial Mineral Water Company have a niche for a case of their manufactures. All these will well repay inspection, though it were only for the curious thoughts they engender as to the peculiar half-American, half-English nature of Canadian pharmacy.

THE WEST INDIAN COLONIES

deserve the palm for forwardness, and there is little wonder that "the Prince" lingered here, and scattered compliments while he lingered on Saturday the first. The court is a bright and attractive one, and neither pains nor expense have been

spared to make it so.

BAHAMA sends sponges (honeycomb and Turkey), evidently of good quality as to texture and excellent in shape. Canella bark and several other drugs are shown, and that the island is rich in seents is proved by the fact that Rimmel has distilled some of her flowers into an exquisite perfume. JAMAICA has also an excellent exhibit. GRANADA comes forward with nutmegs, Adenanthea paronia seeds, and other drugs. Tobago, like the others, comes out strong with Job's tears and jequirity seeds, and shows how these can be applied in the formation of baskets and other such articles, useful and ornamental. DOMINICA is cornered, but in the eorner there is much which will interest the pharmaeist. The attendant was very proud of the 47-per-cent. rum (red and white), and drew our attention to it, but we preferred to admire the milder tipple which the Montserrat Company have brought together in their magnificent show-ease. Ginger, from plump soft and fresh root to the dried root of pharmacy; native sulphur (remarkably bright in colour), and various preserved fruits are here shown, as well as the seed of Bixa orellana, which is largely and successfully eultivated, and pays well when manufactured into annatto. Mr. A. Ludovie and Mr. M. Meltz send to this section collections of pative remedies which promise to be of great interest when they are shown.

MAURITIUS.

Of minor Colonies the Mauritius comes out well. Mr. I. Auffrey (a pharmacist) shows Cinchona succirubra bark cultivated in the island, and yielding 1.7 per eent. of quinine sulphate, and 0.4 of einchonine. It appears that Mr. Auffrey

began to make quinine sulphate in 1884, the first time it was made so far south. Specimens of the alkaloids are also shown. From the leaves of Siegesbeckia orientalis Mr. Auffrey in 1883 isolated a bitter glueoside Darutyne, so ealied after Mr. Daruty, in recognition of the work which he has done in connection with the Mauritius. But what will make this small court most attractive to pharmacists is the splendid vanillas which are exhibited by M. Jules Joly, of Port Louis, and which perfume the whole court. Some of these are 9 inches long and all are beautifully frosted. In the court adjoining (Seychelles) there is a similar, but not quite so fine show of vanillas, essential oils, kino, papaw-julee, and other medicinal products, and also beautifully mottled soap. Mr. J. J. Sharp exhibits these through Messrs. Wright, Layman & Umney.

Hong-Kong Court.

Before this we had inspected narrowly this court, and comment upon it last, so that we may do so more in detail than we have with other sections. Here one of the most attractive features is a model of

A Chinese Pharmaey.

No corner of the exhibition is likely to be so attractive as that containing the curious and valuable contribution of Dr. Ho Kai, of Hong-Kong. Dr. Ho Kai, we understand, is a gentleman who spent a considerable time in this country, studied both law and medicine, took the degree of M.B., C.M. of the University of Aberdeen, and M.R.C.S. of London, and now practises both the legal and the medical professions in Hong-Kong with much success. He has sent to the exhibition a model of a Chinese druggist's and doctor's shop, and a collection of the drugs used by the Chinese in medical treatment.

The model is wonderfully complete in its details. Dr. Ho Kai has been as conscientious indeed as the actor who blacked himself all over for the part of Othello. For if one of the polite gentlemen in charge of the Hong-Kong section will open the back of the building, bed-rooms and drawing-rooms fully furnished, and other arrangements of a Chinese

household will be found.

The shop appears to be the property of a doctor. This is usually the case in China, though sometimes a doctor and a druggist are in association. In the little back room are the doctor himself and a patient consulting him. The chief feature of a medical consultation in China is the process of feeling the pulse. This is an extraordinary business, and occupies some fifteen or twenty minutes. The doctor takes the patient's wrist, and, first pressing it hard with his four fingers, checks the flow of the blood; then he releases the pressure, and plays on the artery with his fingers with a great pretence of science. His patient believes fully, and he himself more than half believes, that by this means any sort of humour or disorder in the blood can be detected. Then an elaborate prediction follows, such as that in three days at sunset your appetite shall return, or whatever the diagnosis may justify. Then a prescription is given, generally for pills or powders, which are forthwith dispensed in the front shop.

This part of the model shows a shop not very much unlike those with which we are familiar, but with partially open frontage. Over the shop and on large signs hanging on right and left are the name of the owner and statements indicating that this is the establishment where all sorts of pills and powders are sold. Behind the counter two shopmen are engaged weighing. Both use the sort of steelyard scales which are known to many people as the usual balance in China and Japan. But at the far end of the shop there is a pair of scales of English fashion for bigger quantities. One shopman is just finishing his business with a servant girl, who has her bundle of medicines in flat paper pareels suspended from a long string. The man is weighing the piece of money which she has just given him. This is an inevitable precaution. Another lady customer is waiting behind for this investigation to be finished. At the end of the counter nearest the street is a rough sort of desk. On the counter is the well-known abaeus, by which, with extraordinary speed, the Chinese make all their ealculations. Behind are rows of drawers all filled with drugs, a glass case containing the more special medicines, and variously shaped pots and tins. Sitting at the back part of the shop are two coolies, one rolling pills on his knees and the other powdering something

floor above and all round the gallery thus formed shelves

containing a stock of drugs.

The materia medica of China is of some magnitude, and when the fact is considered that it is quite a common thing to concoct a dosc from a few scores of drugs, it is well for the Chinese that their materia medica is large and varied. A fair idea of it will be obtained from Dr. Ho Kai's exhibit of native drugs as prepared for use by the druggist. The preparation of drugs receives a large share of the Chinese apothecaries' attention, and the better part of an apprentice's period of pupilage is devoted thereto. Many drugs are used as they are collected, but there are others, such as rhubarb for example, which have to be brought down to workable size before they are sold. Rhubarb is presented in thin longitudinal slices, so thin and so well cut that the wonder is how it is done. When it is stated that it is done with an ordinary knife it is no less astonishing, but we have the explanation in the fact that most of the drugs are prepared while in the fresh state, and subsequently dried. Several examples of drugs so prepared are included in Dr. Ho Kai's large and interesting collection. It need scarcely be said that Chinese materia medica is not confined to the vegetable world; it is little changed from what it was at the beginning of this era, and resembles somewhat the materia medica of England in the fifteenth century. The animal kingdom yields many remedies, some of which are held in high esteem. Lactopeptin is not in it, and is not likely to replace the living fowl's gizzard (Ki-lin-kin), which is used for dyspepsia, and in urinary complaints; earth worms and oyster shells have a use, and nrinary deposit (Jin-ching-peh) in white cakes is applied to the throat and tongue in cases of ulceration. Tiger's bones, which enjoy the euphonious name Hu-kuh, are reported to be an efficient agent in the cure of rheumatism, ague, diseases of the bones, and general debility. Those who are of a homocopathic turn of mind will see where similia similibus eurantur comes in here; the proximity of a live tiger induces a muscular and nervous state not unlike what a conglomeration of the symptoms of the diseases named would bc. Snake skins (Shie pi) are used for leprosy and rheumatism, and there are few diseases which asses glue $(O \cdot Kian)$ does not touch, but it is chiefly used as a tonic, for coughs, as a diuretic, and as an emmenagogue. This remedy is in the form of small black cakes, with the name printed in gold in Chirese characters, which determine its market value. It is prepare I from the black ass's hide, and is highly esteemed. Cow-hide glue (*Nin-pi-Kiang*) is less valued. It is in scales, transparent, and of a brown colour, and is used as an astringent, vulnerary, and demulcent. Centipeds (Chuan-puhtsu) mounted on a stick, which is not swallowed—are used as an anti-poison, but what virtue they may have in this direction we could not ascertain. Of vegetable products there is goodly store. The following are noticeable: The roasted bulb scales of Manis Javanica (Chuan-shan-Kiah), used for rheumatism and skin diseases; the peculiar yellow fruit and stalks of Dendrobium ceraea (Shik-Kuh), used as a stomachic and for pectoral affections. Senna, an unusual Chinese remedy, is used as an aperient under the name of Fan sic-yip, but whence the drug is obtained we do not know, and evidently the exhibitor is in doubt, for the botanical name of the plant is not given. Spores of different species of filices (Hai-kin-shu) are said to be a specific for fevers and hæmaturia; indeed, it is marvellous how many remedies there are for such complaints and rheumatism, and one is inclined to be thankful that he is not a native of Hong-Kong. Mouleria sp. (Chuan pei mu) is also used for fever, hemorrhage, and mammary abcesses. Peach kernels (Tan jin) are used for coughs, as a "blood remedy," for rheumatism, and in amenorrhea, and croton fruit (Pa-tan) is a purgative. This is ranked as seed, but it will be found on breaking one of the fruits—which are not unlike a glo-bular cardamom—that it contains four seeds. Camphor (Chang-nan) is used for similar purposes to what we use it in this country, and also for itch. Powdered indigo (Ts'ingtai) is applied to swellings, bruises, and the like. The seeds of Melia sp. (Chuen-hui-tsze) are highly esteemed as a remedy for worms in children, as well as for fevers. That the Chinese are not ignorant of the advantages of relieving the human stomach by the use of digestive agents is evident. The seeds of Torreya nucifera (Fei-tsze), in addition to anthelmintic and laxative properties, are said to be peptic. Moreover, assimilation may be backed up by the use of the root of Dioscorea sp. (?) (Invai-shan), which is said to possess the power of increasing the nutritive value of butcher's meat. This specimen is an excellent example of Chinese pharmacy, and shows the care and work which are expended to fit drugs for administration. The root is in scraped cylindrical sticks, 5 inches long and \(\frac{1}{2}\) inch in diameter. Several other drugs of a very hard nature may also be noticed in thin slices similar to rhubarb.

Of remedies from the mineral world, steatite (Chuan-shi) is used for diseases of the bladder and kidneys; sulphate of soda as a purgative; dolomite (Hwa-ju-shih) as an astringent, styptic, and vulnerary; potassium nitrate (Ya-sian) for purposes much similar to what it is used everywhere; and fossils (shih-huai) find a use in nterine disorders and as anthelminities. Apart from these native remedies, the Hong-Kong section contains some interesting exhibits by Messrs. A. S. Watson & Co., of the Hong-Kong Pharmacy. But of these we must postpone our notice to a future issue.

Before closing this report, we desire to draw attention to the Straits Settlements drug exhibit, which is almost a duplicate of the Hong-Kong exhibit, prepared by Dr. Irvine Rouell. With this an excellent herbarium has been sent. Wall space has not permitted its exhibition, but we may state, for the benefit of those who are interested in such specimens, that they may be seen by making application to the

Commissioner.

AUSTRALIAN NEWS.

VICTORIA.

THE annual meeting of the Pharmaceutical Society was held in the Melbourne College of Pharmacy on March 10. Mr. William Bowen, president, was in the chair, and there were twenty-five other members present. The business was of a mixed character. The first part of it comprised the election of new councillors (Messrs. Bowen, Francis, Nelson, and Tompsitt) and auditors (Messrs. Atkin and Hodgkiss). After several of these gentlemen had returned thanks for the honour conferred upon them, the annual report and balance-sheet were submitted and adopted. A paper on "Ipecacuanha Wine" was then read by Mr. Blackett, in which he attributed the deposit to ipecacuanhate of emetine and to action of tannin on the alkaloid. An interesting discussion followed, and a cordial vote of thanks was awarded to Mr. Blackett.

The President delivered an interesting address, which was very well received, and called forth a unanimous vote of thanks.

A feature of the evening was the presentation to Mr. Paul W. Farmer—the dux student of the School of Pharmacy—of the Gold Medal and the President's prize, consisting of Buckle's "History of Civilisation."

[Mr. Bowen has since this meeting left Melbourne for this country. He will travel by the United States and Canada,

and may be expected to reach England in June.]

Since Mr. Joseph Bosisto left Melbonrne to superintend the arrangement of the Victorian Court of the Indian and Colonial Exhibition, he has been re-elected member of Parliament. An indication of the favour in which Mr. Bosisto is held by his fellow-citizens is afforded by the fact that he was on this, as on the last occasion, at the top of the poll.

NEW SOUTH WALES.

TRADE NOTES.—We have had some business changes in this colony of late, and there is a prospect that there will be more before long. The business of Mr. D. C. Hollander, of Surry Hills, has been sold to Mr. C. E. Towl; and Mr. Pratt, Sydney, has transferred his business to Mr. Townley, Nyngan. An important step has been taken in the sale of the business belonging to Messrs. Prosser & Co. to a limited company—viz. The Australian Drug Company—with Messrs. Kemp & Nicolson as managing directors. Mr. Prosser is leaving Sydney for England, for the benefit of his health. Mr. Prosser is a shareholder, and will act as bnyer for the company. Messrs. Toogood & Son, and The Crown Perfumery Company, of London, England, are now represented here by Mr. A. J. Joseph, who has opened an office in Bond Street, Sydney.

Chemists at Work.

THE SOMERSET HOUSE LABORATORY.

of special interest to the trading classes when the wretched working of the Adulteration Act of 1872 was brought under the serutiny of the Select Committee of the House of Commons, which investigated it in 1874, and on whose suggestions the new and much more successful Sale of Food and Drugs Act of 1875 was based. The first Act placed in the hands of smart, self-seeking but incompetent so-called analysts a degree of power which, as a body, they were totally unfit to exercise. At that time the public and a considerable section of the Legislature had a simple faith in the occult powers of analytical chemists, which was worthy of the days when witchcraft was honoured and feared. The sensational but unsupported assertions of men who could attach a few letters after their names were accepted with an innocent faith, which the self-styled "doctors" and "analysts"

farmed with excellent results. In an unhappy session the reputations of all dealers in foods and medicines were committed to their seience, and this proved so attenuated that there was not only nothing like enough to stretch over the country, but what there was could not stand the strain of law court proceedings. Sir Henry Peek, who was a member of the Select Committee, was the most earnest advocate for the appointment of the Somerset House chemists as a Board of Referees to cheek the certificates of public analysts, and the section of the new Act which added this work to that institution has abundantly justified his prevision, and has made the legal control of the sale of foods and drugs a possibility and, to a certain point, a success.

The chemists of the Inland Revenue Department had had immense experience in the analysis of many of the principal substances which were likely

to cause prosecutions, but the power given to them, which was really though not nominally judicial, was dangerously large. The analysts, who knew their own shortcomings, opposed the appointment vigorously; those tradesmen who knew they had nothing to fear from competent serutiny supported it. After ten years of experience, it is time to record how ably Dr. Bell and his associates have done their work. Their certificates are respected by analysts and tradesmen, Courts and the public. Whenever they have been challenged the weight of the evidence with which they have been supported has proved that the Somerset House laboratory is a place where real and good work is done. We had no doubt of that fact before, and a recent occasion to visit Dr. Bell at the laboratory not only served to confirm our belief, but gave us a pleasant half-hour in seeing what was actually going on in this Government Department.

Somerset House furnishes an important battalion to the big army of Government officials, who cost us so much and worry us so frequently. The spending departments at Whitehall are a much better beloved set of gentlemen; Somerset House has to collect the revenue and prosecute defaulters, and it is not easy to win popularity this way. But this De-

partment, with the Post Office and the Custom House, have the reputation of doing a fair proportion of work for their pay—a proceeding which though not very exceptional in ordinary mortals, becomes almost a virtue in Government servants.

The laboratory is in the remotest part of the great quadrangle, on the top floor. Dr. Bell, F.R.S., the Principal, occupies a comfortable but not a luxurious apartment in the midst of sixteen other spacious rooms, in which his deputies and assistant chemists are busily engaged. He has a well-stocked library of scientific books at his elbow, and his endless work of receiving samples, supervising their examination, and reporting on them, cannot leave him much time to satisfy the curiosity of inquisitive journalists. But he wished us "Good-day!" in a genial tone, and was good enough to give us every facility to see the work that was being carried on under his supervision.

In the course of our rapid walk through the establishment we found in the first laboratory ten or a dozen analysts engaged in examining lime-juice, worts for sugar, inks for the Stationery Office, butters, and cleetroplated articles for the Admiralty, &c. Milk was the most prominent article of investigation in the next laboratory visited, and samples of

soap for a Government contract were being tested in the third room. Various articles for contracts for the India Office were under examination in the next room, and an open book indicated what was going on. We found on the page reports on chlorate of potash, binoxide of manganese, linseed oil, Rangoon oil, white lead, zinc white, spiritus etheris nitrosi, quinine, &c.

We next passed into a small, well-lighted and comfortable room, which two elemists were engaged in research work en worts. The next room, by a eurious coincidence, represented the extreme of this: here a powerful odour of H₂S, some dis-order and evidence of hard usage in the fittings, proclaimed the presence of the student element. Eight students were at work on qualitative inorganie analysis. At the end of their period of study in this department they are expected to take a first class in the advanced practical of the

Science and Art Department at South Kensington.

The next laboratory was devoted to the examination of export beers. The object of this work is principally to check the rate of drawback of duty claimed by exporters of beers.

We passed on into a suite of rooms devoted to the examination of tobacco. In the first, experts were examining the tobacco in the manufactured state, chemically and microscopically, for adulterants. Here also eigars were being examined, as well as the refuse from the manufacture of cut and roll tobaccos. This refuse consists largely of midribs, and if not used up by manufacturers may be presented to the Customs for drawback. To check the genuineness of the refuse and to determine the amount of normal tobacco therein, the Customs officers submit specimens to Somerset House. This is very necessary for the prevention of fraud. In a small room two analysts were engaged in estimating the amount of moisture and ash in tobaccos and snuffs. This operation necessitates perfect exclusion from other rooms, owing to the highly irritating nature of the fumes, and above the room on the roof of the building a small house is built, in which the operation of ignition is conducted. The

crueibles used (we counted a dozen or more over Bunsen flames) are platinum.

In the next room two gentlemen were engaged in the microscopic examination of snuffs and other articles. For facilitating the microscopic examination there is in this room a case of much enlarged drawings of microscopic sections of various articles and their adulterants. The drawings are the originals of Rochfort Connor, and are a magnificent monument of industry and technical skill. Tobaceo and its effete adulterants are represented in all imaginable sections, and in such a way that the appearance of the merest trace of a foreign leaf in any tobacco under examination is certain to be detected, though it may have passed observation in other departments. Drawings are also devoted to such articles as capsicum, mustard, pepper, linseedmeal (adulterant of pepper), grains of paradise, various starches, &c.

The next room is the still-room. Here Dr. Bell pointed out a unique still of high condensing power. It is an upright still, about 1 foot in diameter by 3 feet high, and cost

about 80%.

Adjoining this is a room specially enclosed for water analysis. This room is so constructed that fumes from other parts of the building cannot enter it. The room is divided into two by a glass screen. The rougher work (which, all the same, is of a very fine nature) is conducted in one part, and the part within the glass screen is reserved for ope-

rations of the highest accuracy and precision.

We next passed into two wort-rooms, and finally through the room of one of the superintending analysts, Mr. Harkness, where several assistants were engaged in the delicate and difficult work of checking and controlling the eharges for duty, founded on the gravity of the worts under the Beer Act. In carrying out this business, the worts at the various breweries throughout the kingdom are sampled from time to time by the officers of excise, who forward the

samples to Somerset House for analysis.

We gathered from what we saw and from casual remarks in eourse of our walk, that tobacco and beer form large sections of the business carried on in this laboratory. When tobacco eomes into the country the chemists here, when necessary, examine it, to determine its purity. So far, nothing but tobacco and the natural moisture gets into the hands of British manufacturers. But the scientific work does not end there. The manufacturers have paid the tax on the raw material, and it is possible that they might add other than the recognised materials—water for cut tobaccos and oil and water to roll tobaccos. Of course any addition other than these, such as sugar, glycerine, foreign leaves, and the like, would defraud the revenue, because the consumer pays duty on what he smokes, and the object of the Government is to get that duty. the revenue officers go round to all tobacco manufacturers daily, watch closely, and occasionally take samples of the manufactured material, and at other times make purchases from retailers, all samples coming to the Somerset House Laboratory. As a matter of fact, tobaceo as sold is a substance of singular purity, a circumstance due it may be supposed rather to the vigilance of the Revenue department than to any exceptional moral purity among the dealers.

Our remaining notes show that the laboratory staff, including students, consists of about thirty analysts. The official salary of the principal is 1.000% a year; that of Mr. Bannister, the deputy principal, 750% a year. The only way of getting into this laboratory is, first, by admission to the Inland Revenue service, and afterwards to the laboratory by competitive examination. Those successful candidates who are selected for the laboratory first have to serve as students, during which period they attend the chemical lectures at the Science and Art Department, South Kensington. Then they are taken on as temporary assistants, and from

this body the permanent staff is recruited.

Previous to 1858, the chemical work of the Board of Inland Revenue was earried on in Old Broad Street, under Mr. George Phillips, the chemist to whose researches are due both the idea of methylating spirit of wine and the process which rendered it practicable to permit the use of alcohol in the arts and in industrial occupations without much risk of its employment as a beverage. Dr. Bell, who took high honours in the chemistry classes of University College in 1849-51, had been Phillips's deputy for a good many years, and suc-

ceeded him as Principal in 1874. He now holds not only the office of Principal of the Somerset House Laboratory, but is also Chemist to the Indian Government, Inspector of Lime and Lemon Juice for the supply of the merchant navy under the Board of Trade, and Chemical Referee under the Sale of Food and Drugs Act. The work carried on in the sixteen separate laboratories to which we have already referred varies of course from day to day, and comprises a long list of different commodities. Much of it has come to be little more than routine work, so perfectly has the system for the examination of dutiable articles for the Customs and Excise been organised. As far as such articles were concerned, the experience of the Somerset House chemists was of obvious advantage for carrying out the requirements of the Sale of Food and Drugs Act. But besides such substances as tea, coffee, coeoa, pepper, tobacco, spirits, beer, which were the old familiar friends of the staff, it became necessary to work up the chemistry of various other food-stuffs, such as milk, butter, mustard, and the like; and it was in regard to such matters as these that doubts were at first freely expressed as to the propriety of entrusting Somerset House with a virtual veto on the opinion of all other analysts. But the few occasions when the certificates of Dr. Bell and his associates have been challenged have indicated how thorough is the method of investigation pursued by these chemists before they come to a decision. This was proved very satisfactorily in the remarkable milk case which was tried at Manchester in the latter part of 1883. A milk-seller had been convicted of adultera-tion of milk with water. The analysts employed by himself, Mr. Oswald Wilkinson and Mr. Otto Hebner, agreed with the city analyst, Mr. Estcourt, that chemical tests proved the milk to be watered. They depended on Wanklyn's process, in which the non-fatty solids were extracted and weighed after three hours' drying at 100° C. These chemists, along with Wanklyn, Dupré, Wigner, Blyth, and some others, all testified that a milk could not be pure if it contained less than 9 per cent. of non-fatty solids extracted under the conditions described. Dr Bell followed another process, and his results corresponded elosely with those of the other analysts, but he utterly disagreed with their theory, which, indeed, has never stood upright since. It came out then that to prove their results the Somerset House chemists had examined multitudes of samples of milk from all parts of the country, from different breeds of cows, in all seasons, and under the most varying conditions of foods. Dr Voeleker supported Dr. Bell's evidence, and the long array of scientific evidence on the other side crumbled to pieces. Dr. Bell's systematic researches on foods, besides revealing

their exact composition, have been most fruitful in results possessing considerable scientific interest. His research on butter, which is admittedly a great success, served to explain for the first time the peculiarity of butter fat. Prior to his investigation the fatty acids of butter were regarded as present as simple glycerides, but he showed that the radicals of the volatile and fixed fatty acids are combined in the same molecule to form a compound etheral salt, and that when an attempt is made to practically separate the various glycerides by solution and precipitation in mixtures of ether and alcohol the several parts remain essentially of the character of a butter. An important outcome of this investigation was to establish the important fact that the fixed fatty acids varied in commercial butters from 85.5 to 89.90 per cent. instead, as was previously supposed, only from 85.4 to 86.20 per cent. Here was a margin sufficient to condemn half the butters of the country as adulterated, and it would be difficult to overestimate the practical value of this one fact at the time in the interests of the trade in saving them from unjust prosecutions for selling an alleged impure article. In connection with this investigation Dr. Bell devised a simple method for testing the genuineness of a butter founded upon the specific gravity of the fat at a temperature of 100° Fahr., as compared with that of ordinary animal fats, and the test being of easy application effects a considerable saving of time and labour to ehemists. Dr. Bell further pointed out the interesting fact that the result of the depreciation in butters by keeping is a gradual approximation of the butter

towards an ordinary animal fat.

The results of Dr. Bell's years of researches on the various articles of food, including butter, are recorded in his work entitled "The Chemistry of Foods," &c., published by the

Science and Art Department. The research on each article is most complete and exhaustive, and in many instances the results possess considerable scientific interest. A mere inspection of the results recorded under the several heads is sufficient to satisfy the mind with the thoroughness with which the research on each subject has been conducted, and undoubtedly there was a great want for such a series of modern and reliable investigations into the composition of the different articles of food. To the processes of analysis in connection with the different commodities Dr. Bell has contributed important improvements, and his work is recognised as a standard by all chemists who occupy themselves with food analysis. Dr. Bell's work has been translated and published in German at the instance of Professor Sells of Berlin.

In 1870 Dr. Bell contributed a very important paper to the Chemical Society, "On Fungi and Fermentation." paper, among other things, Bell proved that there is an important difference between the grape and the malt ferments. He showed that the grape yeast is capable of producing over 32 per cent. of proof spirit, while the malt or brewers yeast ceases to possess vitality when about 28 per cent. of proof spirit has been produced. Either yeast transferred to the soil of the other loses much of its fermentative power. Subsequently Bell studied the life history of the alleged distinctive "sewage fungus," and identified it as a member of the confervoid Alga, viz., oscillatoriacea.

Dr. Bell, in addition to his scientific labours, has been eminently successful in the preparation and publication of two or three important departmental works which have been greatly appreciated in the Inland Revenue Department.

Foreign und Colonial.

Dr. Don Ricardo de Sádaba y Garcia del Real, has been appointed to the Chair of Practical Pharmacy in the Madrid Faculty of Pharmacy.

A GUANO-WORKS at Basle, in Switzerland, which has for some time been worked at a loss, is now about to be turned into a manufactory of perfumery.

A LARGE drug firm in Honolulu, the capital of the Sandwich Islands, are now trying the experiment of raising flowers on a large scale for the manufacture of essential oils.

By decree of the Italian Ministry of Finances, tamarinds containing over 20 per cent. saecharine matter will be elassed as "preserved tamarind," and as such be liable to an import duty of 80 lire per 100 kilog. (about 33s. 6d. per ewt.).

THERE is to be a "National Industrial Exhibition" in Constantinople; when is not stated, but it is comforting to hear that the Sultan has ordered the preparations to be pushed forward with the utmost promptitude.

THERE is a rush for the shares of the Berlin "Chemische Fabrik auf Actien" (vorma's E. Schering); caused by a report that the board of directors are negotiating for the purchase of a new and valuable patent.

THE French Senate offers a prize of from 25,000 francs to 50,000 francs to any chemist who shall discover the best practical method for making researches with the view of ascertaining the toxic principles and impurities contained in " vinic alcohol.

THE borax and soda deposits in Nevada are said to prove of much greater importance than was supposed; and, but for the difficulties in the way of transport, the supply from that quarter would be quite sufficient to render the United States independent of other countries for their requirements.

In some of the Russian settlements in Wiseonsin and Nebraska a rather peculiar treatment for sore throat is in use among the people. They gargle their throats with coal oil. In cases of colds and coughs they take the same remedy internally. The effect is said to be excellent.

IT appears that efforts were made to acclimatise the coca plant in Java many years ago, long before the alkaloid of the leaf was used in pharmacy. The Dutch-Indian authorities, however, discountenanced the cultivation of the shrub, fearing that its use would have an effect upon the natives as pernicious opium-eating.

DR. WERNER SIEMENS has promised a donation to the value of 25,000%, towards the foundation in Berlin by the German State of an Institute for the pursuit of researches in Natural History for technical purposes. The total cost of the Institute is computed at over 58,000%, including 15,000%. for apparatus.

Two cases of iusanity, caused by the cocaine-habit, are reported from Lucerne, where a medical man and his wife have been placed in a lunatic asylum owing to hallucinations as a result of over-indulgence in cocaine. They had taken the drug in the first instance as a cure for the morphinecraving to which both were subject.

THERE are at present 2,682 pharmacies in the Russian Empire, including military and hospital pharmacies, or one to about 37,000 inhabitants. This number comprises 627 soealled village pharmacies, which, according to a recent law, may be managed, as in fact they mostly are, by unexamined assistants, greatly to the detriment, it is said, of legitimate pharmaey.

A VEXATIOUS regulation in connection with the Roumanian Customs-office has just been abolished at the request of several foreign Governments. This regulation allowed the Roumanian Customs officers to delay goods at the frontier station until the completion of a chemical analysis as to their nature. The rule was applied most frequently to Austrian or Hungarian goods.

PHARMACY seems in a bad way in Madrid. The principal Spanish pharmaceutical papers complain bitterly of hard times among the trade; shop after shop is being closed, and in some houses the takings have fallen to one-fourth of what they were a short time ago. The decline in legitimate pharmacy is ascribed principally to the establishment of military pharmacies, and to the increase of quaekery and the sale of

TEA-SEED OIL is largely made in China, and is said to be much preferable to cocoa-nut oil for many purposes. A correspondent in the Tropical Agriculturist propounds the question whether it would be profitable for Ceylon teagrowers to extract the oil for commercial purposes. It is claimed that it would much relieve the tea plants to be freed from the seedlings, which could be gathered while in an unripe state; but, on the other hand, it is pointed out that it is the least valuable varieties of tea which seed earliest and most copiously. To get the maximum of oil the seeds ought to be left to ripen fully, and this would involve rapid exhaustion of the soil. As it is not likely that growing tea merely for oil will pay, the better course would be to get the weeders to remove the blossoms. Immature seed, smashed, is readily eaten by cattle.

THE Customs tariff of the Dutch East-Indian Colonics has just been revised, the following articles of import being among those affected by the alterations:-Resins, instruments (mathematical, surgical, optical, and other) and apparatus, machinery, and indiarubber for use in factories are admitted duty free; brushes, spectacle-glasses, paints, dry and wet, linseed oil, and petroleum pay 6 per cent. ad valorem; glass and glassware, including crystal, perfumery; if not prepared with alcohol: eider and perry 10 per cent. ad valorem; mineral and artificial waters 3.60f. per 100 bottles; fruit syrups, not prepared with spirits, 15f. per 100 bottles; varnishes, perfumery; and fruit syrups, prepared with alcohol ather sulphurious, and spirituous liquors, 40f. per hectolitre, containing 50 litres alcohol at 15° Centigrade; tea, 0·20f. per kilogramme; gambier 20f. per 100 kilogrammes; opium 450f. per 100 kilogrammes, and non-specified goods, including, we presume, drugs and elemicals, 6 per cent ad valorem.

COPRA is made by breaking cocoa-nuts and removing the kernel in pieces as large as possible. These pieces are then exposed to the rays of the sun (of course protected in rainy weather), and in a few days the oil begins to exude. When exudation is complete the kernels are placed in a small ox-power mill, or rather mortar and pestle. The mortar is generally of very hard wood, and the pestle provided with a long arm. The kernels being crushed by this means, more oil is expressed, which, together with that extracted by the sun, is termed the first grade. The residue of erushed kernels

is set on fire in the mortar, and produces a further supply of oil, termed second grade copra. After this operation a residue resembling oil-cake is left and employed for cattle food.

NEW FIRMS.—Moritz Brandstaetter, oil refiner, Zniesienie, near Lemberg, Austria. Bruno & Cie., Roubaix, France, chemicals, deed of March 1, 1886, term 10 years, capital 150,000f. Cheminant & Dorcivae, Nancy, France, drugs. Deed of March 1, 1886, term nine years and nine months, capital 60,000f. Chemische Fabrik, Camentz, Silesia, proprietor Ed. Koelıler, pharmacist. C. Hotze, Christburg, near Marienburg, Germany, drugs. Hoffmann & Schinke, 74 and 17 Thurmstrasse, Berlin, drugs and dyestuffs. Em. Maillard & Cie., Billancourt (France), and at Paris, drugs and pharmaceutical products; extension of partnership for five years. Soules Frères, 52 Rue de Sévigné, Paris, chemicals; extension of partnership for 10 years. Carl Striegler, Meuselwitz, Germany, drugs and dyestuffs. Lockenstein & Schreiber, Rostock i/M., Germany, oil refiners and soap makers. Victoria-Droguerie, M. Pursch, Posen, Germany, drugs. Wasmuth, Wittenburg i/M., Germany, drugs. Bernhard Ziller, Meuselwitz, Germany, drugs and dyestuffs. Dufour & Figarol, Epinal (France), starch, dextrine, and tapioca; deed of March 20, 1886, term fifteen years, capital 200,000f. Richard Eggert, Breslau (Germany), drugs and dyestuffs. L. Fouquet & Cie., Marseilles, cours Gouffé 51, oils and soaps. G. Lambert & H. Long, Marseilles, Rue de la Providence 15, drugs. Richard Pflug, Plauen (Germany), drugs. Carl Renz, Basle, manufacturer of chemicals, colours, and varnishes. Sieberg & Richter, Luebeck, drugs.

The comparative statistics of Italian imports and exports during 1884 and 1885 have been published, and show that, while on the whole there has been a fair increase in the imports of articles connected with the pharmaceutical and chemical branches, there has been a heavy decline in Italian exports to foreign countries of these articles, with the exception of minerals. The figures in lire (1 lira = about 10d.) are as follows:—

	Imp	oorts	Exp	orts
	1885	1884	1885	1884
Spirits (beverages and oils)	82,452,610	56,502,573	113,492,275	164,600,302
Including spirit in casks	6,416,450 19,967,310 6,750,785 18,542,700	1,019 640 10,746,290 5,222,340 19,897,218	225,950 46,741,370 —	627,600 72,734,490
Chemical products (medicines, resins, and perfumery) Including sulph. of quinine	36,029,606 1,703,570	*40,796,676 1,187,400	36,128,328 2,025,210	40,831,837 5,633,800
Argols Wax vestas Cinchona bark Gums and resins (worked) Soap (common)	115,170 12,600 1,378,350 11,347,350 1,244,025	118,635 6,200 3 987,750 14,762,400 974,100	16,380,500 1,501 800 32,625 344 250 2,546,925	15,253,500 2,275,200 88,000 370,200 2,570,325
Dyes, and materials for dyeing and tanning Including materials for dyeing and tan-	24,940,170	25,552,642	12,055,290	13,793,150
ning (not ground) Materials for dyeing	6,393,510	5,869,200	3,846,600	3,715,173
& tanning (ground) Indigo Minera's, metals (crude	230,520 7,860,800	241,955 7,185,030	7,008,640 688,500	7,922 316 1,662,000
and manufactured)	281,900,466	184,582,017	215,691,026	51,097,360
Sulphur (crude and refined)	4,050	5,225	26,033,130	26,334,950

The figures relating to olive and cottonseed oil are especially interesting, as it is known that the latter article is largely used for adulterating the former. Some tons of cottonseed oil found their way into Italy last year, while the imports of olive oil—chiefly, it may be assumed, cheap varieties used for doctoring the Italian oil—stood to the exports in proportion of 1 to 7 in 1884 and 4 to 9 in 1885. The Italian exports of quinine sulphate fell off by about two-thirds last year, owing no doubt to the stoppage of the Milan factory, an event which also seriously affected the imports of cinchona bark. The movement in dyeing and tanning materials shows no considerable fluctuation, but the exports of minerals and metals, crude and manufactured, in 1885 were four times as large as in the previous year.

Obituary.

ROBERTS.—The Italian Pharmaceutical journals contain sympathetic references to the loss sustained by pharmacy in the decease of Mr. Henry Roberts, the proprietor of the Pharmacy of the British Legation in Florence. Mr. Roberts had only attained his 29th year, having been born in Florence, of British parents, on September 3, 1857. After having received his elementary education in England, he passed several years in France and Germany, applying himself to the study of chemistry and pharmacy, and passed his Major examination in England in October, 1878. Mr. Roberts settled in Florence towards the end of 1879, and early in the following year passed his final examination under the Italian laws in that city in a brilliant manner, being complimented by the examiners upon the thoroughness of his acquirements. He then became proprietor of the Pharmacy of the British Legation, and in that capacity won the esteem and affection of every one with whom he was brought into contact. His loss is a severe one to his family, his friends, and the profession of which he was rapidly becoming an ornament.

MUSPRATT.—Mr. James Muspratt, the founder of the wellknown chemical business at Widnes, and father of the late Dr. Sheridan Muspratt, the chemical author, died on Tuesday last, May 4, at the ripe old age of 93, at his residence, Sca-forth Hall, near Liverpool. He was born at Dublin in the year 1793. His parents died about the year 1811, and, having been apprenticed to an apothecary and drug merchant, he learned some chemistry. He commenced chemical works in Dublin, where he manufactured several chemicals, such as acetic acid, prussiate of potash, &c.; but having conceived the idea that the making of soda from common salt would be profitable, he came to Liverpool in 1822, and bought the works in Vauxhall Road, and so soon as he had obtained sufficient capital crected plant for the manufacture of soda or alkali, which he commenced on a large scale in 1823. At first there was great prejudice against the use of the so-called artificial soda, but as it was both stronger and cheaper than the soda made from kelp, the soap-makers began to use it, and in a few years the demand outgrew the supply. To meet this demand Mr. Muspratt erected works at St. Helens, in partnership with Mr. John Gamble; and about the year 1831 at Newton, half way between Liverpool and Manchester, on the newly-opened railway. Both in Liverpool and Newton he had to sustain actions for damages and nuisance, in some of which he was successful, but finally had to close the works in Liverpool, and remove the Newton works to Flint and Widnes. During this litigation the condensation of the hydrochloric acid was much improved, and by degrees the nuisance effectually removed. For many years he remained the largest manufacturer, and increased the size of his works very rapidly. The trade is now one of great importance, and till the development of the ammoniasoda process of late years, a fairly profitable one. The ammonia-soda process itself was worked on a large scale by Mr. Muspratt many years ago, but at that time, owing to defective plant, the loss of ammonia was so great that the older Leblanc method was more profitable. Deceased took an active part in the public life of Liverpool in conjunction with Sir J. Walmsley, Mr. George Holt, the late Mr. William Rathbone, and others, particularly in connection with the Mechanics' Institute. He was always a staunch free-trader and supporter of the Anti-corn Law League. An intimate friend of Baron Liebig, he was chosen by that distinguished chemist to put his theories of agriculture into practice by the manufacture of artificial manures, a manufacture which is now of great importance and extent. He lived a comparatively retired life at his residence, Scaforth Hall, for the last twenty-five years, as most of his old friends had passed away, and his sons undertook the management of the business. Dr. Sheridan Muspratt died ten years ago, and Mr. Richard Muspratt last year at Flint. Mr. E. K. Muspratt, the present head of the business, is his only sarviving son.

Miscellancons Formula.

LIQUID GLUE.—Fill a glass vessel with the best broken-up glue, and cover with acetic acid. Keep the glass in hot water for a few hours until the glue is melted, and you will have an excellent liquid glue always ready.

MUCILAGE FOR BOTTLING.—Mix 3 oz. gum arabic and 3 oz. distilled vinegar with 1 oz. white sugar. Instead of the distilled vinegar 1 part acetic acid and 5 parts water may be substituted.—Scientific American.

OINTMENT FOR LACERATED WOUNDS .-

Iodoformi		 		gr. ij.
Acidi carbolici		 		mij.
Ung. zinci oxidi	**	 • •	• •	3iv.

M. flat unguentum.

Recommended by Dr. M. S. French, of Philadelphia.— British Medical Journal.

THROAT APPLICATION.—Dr. Tauber, of Ohio, recommends for painful deglutition of the ulcerative stage of tubercular laryngitis the following solution:—

Acidi carbolici	 		 	5iss.
Tine.iodi	 		 	388.
Glycerini	 • 4	• •	 	Зij.

M. To be applied once or twice a day.

-British Medical Journal.

ASTHMA CURE.

Grindeliæ ro' us	tæ		 	 	3viij
Jaborandi foliæ			 	 	5viij
Eucalypti .,			 	 ٠.	5iv.
Digita'is ,,			 	 	3iv.
Stramonii ,,			 	 	ξij.
Culiebre			 	 	3iv.
Potassii nitratis			 	 	3159.
Cort. cascarillæ		• •	 • •	 	3 j.

All to be ground and mixed.

For inhaling in asthma, whooping-cough, bronchitis, &c., burn from a fourth to half a teaspoonful of the "cure," at a time.—Dr. G. S. Goodhart in "Ecl. Med. Journ."

GINGER ALE.

From a paper read before the California Pharmaceutical Society by Mr. V. Schmidt.

A NUMBER of ginger ale extracts are sold assecret compounds, which are composed principally of cayenne pepper, furnishing a so-called ginger ale, which leaves much to be desired. The following formula is cheap, practical, and furnishes a ginger ale almost identical with the imported article. It consists of two preparations, which I will call Nos. 1 and 2:

Extract No. 1.

Take of

Powdered Jamaica ginger			 	16 oz.
Powdered red pepper			 • •	4 drs.
Bicarbonate of potassium	• •	• •	 	6 .,
Diluted alcohol		• •	 	4 pints

Dissolve the bicarbonate of potassium in the menstruum and percolate until 4 pints are obtained.

Extract No. 2.

Take of

Syrup	••		• •	36 fl. oz.
Diluted alcohol		 		10 ,,
Citrie acid		 		2 drs.
Distilled water, q. s. ad		 		4 pints
Extract No. 1		 		4 fl. oz.

Caramel to colour a sherry colour; mix, and after allowing it to stand a few hours, filter.

The extract No. 2 is used at the soda fountain in the same manner as are the other syrups. From 3 to 4 fluid drachms to the glass are required to produce the desired result.

RHEUMATIC REMEDY.

Salicylic acid			 	8 oz. av.
Bicarbonate of sodium			 	5½ ,,
Nitrate of potassium			 	3 ,,
Tincture of colchicum	seed		 	8 fl. oz.
Oil of wintergreen			 	2 fl. drachms
"Sugar House" syrup			 	2 pints
Alcohol			 	2 ,,
Water sufficient to make	te a ga	llon.		

Mix the salicylic acid with the water in a gallon bottle, and gradually add the bicarbonate of sodium in small portions at intervals of a few moments, giving time between the intervals for the effervescence to subside. When it has all been added and dissolved (which will require about two hours), add the alcohol, in which the oil of wintergreen has previously been dissolved; then the tincture of colchicum seed and syrup, and lastly the nitrate of potassium, allowing to stand until the latter is dissolved, then filter. Dose for an adult, a dessertspoonful three times a day.—The Formulary.

SEA FOAM FOR THE HAIR.—Mr. P. Q. Boyden sends the following to the Western Druggist:—

Aqua ar	nmoniı			 		2 fl. ez.
Tinetur	e cantha	rides		 	:	l ,,
**	capsica	m	• •	 		
Alcohol				 	32	, ,,
Water				 	32	,,
Carbona	te putasl	1		 	:	OZ.

Dissolve the potash in part of the water and mix.

BARY-SOOTHER.

THE following is somewhat different from the preparations on the market:—

Tincture	of hy	yoseya	mus	0.0	 	8 fl. oz.
Fluid ext	raet (of sen	ua		 	2 ,,
Oil of ani	se				 	3 fl. drachms
Chlorofor	rm				 	30 minims
Aleohol					 	3 fl. oz.
Water					 	4 pints
Sugar					 	6 lbs. av.

Dissolve the oil of anise in the alcohol, and mix with the tincture and fluid extract; add the water, and filter until clear. Mix the chloroform with the sugar, and dissolve the sugar in the liquid by agitation.—The Formulary.

LEMONADE TABLETS.

		G	ramme	
Powdered white sugar	 	 	800	
Bicarbonate of sodium	 	 	100	
Tartaric acid	 	 	100	

Are intimately mixed, flavoured with 5 drops oil of lemon, and made into a mass with 200 grammes alcohol. The mass is now pressed into any convenient mould (previously well oiled with melted cacao butter), and dried well in a drying closet. The lozenges must weigh about 20 grammes, which will be sufficient for a tumbler of water. Other flavours may be obtained by substituting the above-mentioned quantity of oil of lemon with 2 drops of oil neroli, or 5 drops oil of sweet orange, or 2 drops otto of rose.—Dieterich in Pharm. Central-halle.

OSBORNE BOUQUET.

Extract	orris			10	OZ.	1	Extract	jasmine)		7	OZ.
	violet							amberg	ris		2	.,
9.9	cassie	• •	• •	15	25			-				
	vitivert											
22	santal			5	99		Otto ros	se		• •	50	minims

MILLEFLEURS AND LAVENDER.

				Oz.
Extract	lavender	 	 	 1
**	milleflenrs	 	 	 20
59	ambergris	 	 	 1

PRINCESS BEATRICE BOUQUET.

Rose triple	20 oz.	Extract rose	40 oz.
Extract violet	30 ,,	", orange	6 ,,
" jasmine " tuberose	25 ,,	" musk	4 ,,
" orris	5	" ambergris	2 "
" vanilla	3 ,,	Ol. French geranium	50 minims
eassie	20	natehouly	10

Scientific Notes:

On Chemistry, Pharmaey, Botany, Materia Medica, &c., Original, Selected, and Translated.

THE LIMIT OF THINNESS.

In a recent lecture before the Franklin Institute, Mr. O. E. Outerbridge, jun., said:—"The gold-beater will hammer the metal into leaves so thin that more than 4,000 are required to make a pile one millimetre in thickness. But vastly thinner gold leaves may be obtained in another way. By electroplating a known weight of gold upon one side of a sheet of copper foil of given dimensions, a coating of gold may be obtained upon the copper whose thickness is readily ascertainable by a simple calculation; then by using a suitable solvent the copper may be removed, when the leaf of gold will remain intact. After a series of careful experiments I have obtained in this way sheets of gold, mounted on glass plates, which are not more than the 1-40,000th of a millimetre in thickness; and I have some specimens to show you, which I have good reason to believe are not more than the 1-400,000th of a millimetre. To give you an idea of this thickness, or rather thinness, I may say that it is about 1-200th part of the length of a wave of light. Taking Sir William Thompson's estimate of the size of the final molecules, and considering that each layer (of molecules) corresponds to one page of a book, our thinnest film would then make a pamphlet having more than a hundred pages."

AMOUNT OF STARCH IN GINGER.

As the result of a dispute before a magistrate, Mr. E. W. T. Jones, F.I.C., was lead to determine the percentage of starch in ground ginger, which it is stated on the authority of Bucholz (1817), contains 1975 per cent. of amylaceous matter. This Mr. Jones had reason to doubt, and consequently made an estimation, employing the process devised by Mr. O'Sullivan. Five grammes of the ground ginger were first purified by extraction with ether, after just moistening with alcohol; then with alcohol (sp. gr. 0.90) at 35°—38°C., and finally with water at the same temperature.

Each of the solutions obtained by treating with these menstrua was evaporated, dryed at 100° C., and weighed. The ginger, thus freed from oily, resinous, and extractive matter, was boiled in water to gelatinise the starch, then submitted to the action of 0·03 grm. of active diastase under proper conditions until complete transformation of the starch into dextrin and maltose was attained. The solution made up to 100 c.c., had a specific gravity of 1·0114, equivalent to 2·886 grms. of solid to the 100 c.c., 5·0395 grms of the solution gave 0·1775 grm. of CuO, and this multiplied by 0·7256 gives 0·1288 grm. maltose for the quantity taken, or 2·585 grms. for the 100 c.c. The optical activity using a 200 m.m. tube, and a Soleil-Ventake-Scheibler polariscope indicated 2·585 grms of maltose, and 0·196 of dextrin, or an equivalent of 52·92 per cent. of starch in the ginger. The following table shows the complete analysis:—

)	Per cent	i.
]	Moisture, i	.e. loss c	n dry	ing at	1000 €	J		10.10	
]	Etherial ex	ctract						3.58	
1	Alcoholic	,,						3:38	
2	Aqueous	**						3.66	
S	tarch					••		52.92	
1	libre, ash,	and loss	S	- •		••		25.42	
								99.06	

In the the original paper (Analysi, April, p. 75) the author gives 19·12 per cent. of fibre and 4·8 per cent. of ash; but by the 5 per cent. acid and soda method only 2 66 per cent. of cellulose, was found.

ADENIN.

In Zeitsch. f. Physiol. Chem. (March 11, 1885), M. Kossel gave particulars of an alkaloidal base which he had extracted from the pancreas and splcen. This substance has many interesting properties. In the first place, it is an isomer of hydrocyanic acid, its empirical formula being $C_5H_5N_5$, but it has not quite the same properties, and exist in the splcen to a small extent only, viz., 5 in 75,000. It is changed into hypoxanthain when treated with nitrous acid, and its physiolo-

gical effects on small animals are similar to those of muscarin and digitalin. A report of a communication and discussion on this substance will be found in the *Brit. Med. Journ.*, p. 757.

SOLUBILITY OF CAOUTCHOUC.

HANAUSEK gives the following ratios of solubility of caoutehoue in different solvents:—

					Negro-	Sierra	
				Ceara	head	Leone	
100	parts o	f ethyl ether dissolve		2.5	3.6	4.5	
100	12	oil of turpentine diss	olve	4.5	5.0	4.6	
100	13	chloroform .	,	3.0	3.7	3.0	
100	,,	petroleum naphtha,		15	4.5	4.0	
100	,,	benzeue .,		4.4	5.0	4.7	
100	22	curton bisulphide ,		0.4		-	

Oil of turpentine and benzene appear to be the best solvents.—Journ. Soc. Chem. Ind.

Sparteine and its Salts.

By A. Houdé (J. Pharm. [5], 13, 39-41.)

Preparation.—The leaves and branches of Spartium scopurium (Cytisus scoparius) are treated with alcohol at 60°, until the washings cease to give a precipitate with iodated potassium iodide. The alcoholic solution is distilled under diminished pressure at a low temperature, and the residue is taken up with a solution of tartaric acid. After filtration, the solution is rendered alkaline by means of potassium carbonate, and is agitated with ether. Fresh tartaric acid solution is added, the sparteïne again set free by alkali, and taken up by ether; and this treatment is repeated until a colourless ethereal solution is obtained, which yields pure sparteïne when evaporated without exposure to air or light. A kilogram of plant yields about 3 grammes of the pure product.

Characters.—Sparteïne is a colourless liquid boiling at 287°. It is soluble in alcohol, ether, and chloroform, but insoluble in benzene and petroleum. It gives abundant white fumes in presence of hydrochloric acid. It is a tertiary diamine. Easily crystallisable salts are obtained by combining it with acids. Potash and ammonia give a white precipitate with a solution of the sulphate; this precipitate is insoluble in excess: hydrogen carbonate produces no precipitate in the cold, but when heated a whitish deposit forms. Concentrated hydrochloric, nitric, or sulphurie acids produce no coloration with the alkaloid. Cadmium iodide gives a white curdy precipitate. Sodium phosphomolybdate gives a white precipitate, soluble on heating. Copper salts give a greenish precipitate, and platinum chloride gives a yellow crystalline precipitate.—Journ. Chem. Soc.

PURIFICATION OF RIVERS.

EXPERIMENTS in the purification of river water by means of electricity are being made at Roubaix by M. Stoffel, engineer, before an international commission. The gist of the process is that the ozone generated by the electrolytic decomposition of the water kills the minute organisms, and oxidises all organic substances, at the same time precipitating the carbonates in course of dissolution, thus effectively purifying the water. The greatest drawback is the expense of the process, which amounts to 0.10 francs per 1 cubic metre of of water, but M. Stoffel thinks that this could be materially reduced by the sale of the by-products obtained in the process.

ELECTRIC PHOTOGRAPHY.

According to Invention and Inventors' Mart, a M. Tommasi has invented an apparatus to which he has given the name of "cfflunograph," and by the use of which all the effects of photography are obtained through the electric efflune, or obscure discharge. Two metal brushes, placed parallel in front of one another, are each connected to the pole of a Holtz machine. A gelatino-bromide plate of about the same height is placed perpendicular to the brushes, so that the sensitive surface contains the borders of the brushes, or is very near them. The current being established, a few minutes suffice to obtain the image in darkness. The efflune probably produces the same effect as the ultra-violet rays. M. Tommasi thiuks there may be a connection between the two extreme parts of the spectrum, which he calls "electric rays."

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SEE ADVERTISEMENT, PAGE 10.

HAY'S SOLUBLE ESSENCE OF GINGER. See page 18.

HAY'S NEW PREPARATIONS.

See page 18.

HAY'S COMPOUND FORTIFIED ESSENCE. See page 18.





THE MEDICAL BILL.

THE Privy Council's new Medical Acts Amendment Bill passed its second reading in the House of Commons on Monday, and May 17 is fixed for its discussion in Committee. Sir Lyon Playfair, who has the Bill in charge, explained that since 1870 there had been twenty-one or twenty-two Bills on the same subject, but that these had all failed owing to the jealousies of different medical bodies. The main objects of the Bill were, he explained, to insist that a registered medical practitioner should have been examined in medicine, surgery, and midwifery, to provide for the combination of examining bodies, to give the Medical Council power to appoint inspectors of the examinations, to give some direct representation of the medical profession on the Medical Council, and to admit to the register practitioners holding certain colonial and foreign degrees. Sir H. Holland agreed to the principle of the Bill, but intimated that some amendments would be necessary in committee. Dr. Balthazar Foster, on behalf of the British Medical Association, supported it, but regretted that it was not of a more sweeping character. He claimed that a larger number of the seats on the Medical Council should be allotted to the suffrages of the profession, and suggested that the six nominees of the Crown should henceforth be elected by popular vote. Dr. Farquharson and Sir H. Roseoe spoke in support of the Bill with some reservations. Mr. Addison, Q.C., raised the most important point. There is, he said, no law at present to prevent an ignorant and unqualified person from practising medicine as he pleases, or without any qualification whatever. He was aware of the offences created by the Medical Aets, and also of the offence in the eye of the law if a person implied that he was a medical practitioner when in reality he was not. At the same time, it was well known that persons might really practise surgery and medicine without being guilty of an offence, provided that they did not say they were licensed practitioners. That was a peculiarity of the law of England, and was not the ease in any other eivilized country. When they were so particular about the qualifications of medical men, and were dealing so admirably with the question as was done in this Bill, he hoped they would attempt to introduce some protection to the medical profession and to the public against those men who were not only not duly qualified, but were not qualified at all. Mr. Bryee in replying admitted the importance of this subject, but suggested that it ought to be treated in a special Bill.

We are glad, however, the point has been raised, because unfortunately the law of England is not exactly as Mr. Addison, Q.C., describes it. By the Apothecaries Aet, 1815, that society has the power of making a monopoly of disease, and can and do collect penalties from people who "aet as apothe-

caries." This is a power which they dare not exercise frequently, for they have perhaps never brought an action under the clause but the judge has felt himself constrained to apologise for the law being as it is. Moreover the Royal Commission which sat a few years ago on the Medical Acts agreed that monopoly of that kind is not desirable, and this was almost the only opinion they did agree upon. It is to be hoped that some member may be induced to move in committee the repeal of the objectionable clause of the apothecaries in this Medical Bill, and Mr. Addison will find enough to do to defend it without trying to make the law more stringent.

THE EXHIBITION SEASON.

THE Exhibitions are upon us this year in unusual force; London, Edinburgh, and Liverpool rivalling each other in the extent and interest of their respective collections. Of the two latter exhibitions we are yet without any detailed reports, but from preliminary correspondence we learn that both Liverpool and Edinburgh have prepared magnificent displays in the respective limits assigned to them. Liverpool aims to bring together all subjects relating to navigation, and has, we believe, fairly kept within this description. Paris had such an exhibition a few years since, and finding space was being taken up but slowly, the promoters let it be understood that they would regard anything that could be exported as associated with navigation, and therefore admissible. Liverpool can, no doubt, bring together all that shipowners ean possibly want, and exhibitors may depend on a sufficiently critical class of visitors. The Edinburgh Exhibition had its origin among the working classes; but the idea has been taken up warmly in all Scotch towns and cities, and although ostensibly and actually international, its main interest to visitors will be in bringing forward under one roof a fairly representative display of the products of Scotch home industry. The Indian and Colonial Exhibition in London this year happens at a critical moment, and ought to have greater effects than merely the provision of a pleasant summer lounge for South Kensington, or even than the education of students. For the first time in their history England and her numerous family in all the zones and climates of the world meet in a strictly family party. Our relatives come home and bring the old mother the fruits of their industry and genius. The occasion will, it is to be hoped, link all parts of the great empire closer than ever. Steam and electricity are narrowing the bounds of the world, but there is an inner bond which links us eloser even than these, and while we may seek to live in harmony and friendly rivalry with men of other races and languages, the whole welfare of the future, not of this nation alone, but it may be said even of this earth, depends upon the close and closer association of the whole Anglo-Saxon race.

Our report will indicate that the South Kensington Exhibition this year will afford an abundance of interest to pharmaceutical visistors among the rest. The exhibition will probably be more of a show and less of a shop than it has been in the past three years, and there are few of us who will not see something new, though it may be that to many Londoners the milking of cows was a greater novelty than the art work of India is likely to be. We shall aim to describe whatever is of importance in the drug line in all these exhibitions, and shall hope the drug trade may find some benefit as well as amusement by visiting one or more of them.

AN INCORRECT OPINION ON PATENT MEDICINE STAMPS.

Our attention has been directed to an article in the Pharmaccutical Journal of April 24, in which occurs a statement in regard to the patent medicine law which is liable to mislead readers in a serious manner. The writer, arguing against the representation made by the deputation from the Trade Association as to the ignorance of chemists in respect of a law which considerably affects their business, declares that he "cannot sympathise with any attempt to place the general body of chemists in such a disparaging light before a public department as would be inconsistent even with inferior classes of traders." We perfectly agree with this argument as far as we understand it. In our own comments published on the same date we remarked on this subject that "chemists who manifest such extraordinary ignorance of the provisions of the Act as was displayed by some of the speakers at the London meeting really descrive very little sympathy. Error on a difficult point may be excusable, but the main features of the Act ought to be familiar to everyone who elects to conduct a business which is partly regulated by it." We are glad to see our contemporary taking a similar view. But we are staggered to find in the same paragraph as that which we have already quoted a statement which abundantly justifies the plea of the deputation, and puts the editor of the Pharmaceutical Journal in such a light as, to use his own words, "would be inconsistent even with inferior classes of tradesmen." The relevance of Mr. Barclay's argument was proportionately destroyed, he says, when he applied it to small traders who do not advertise, "since the case of the supply of small quantities of preparations is not one that the Patent Medicine Stamp Acts have anything to do with. Articles like chilblain liniment, cough mixture, &c., that are sold in twopennyworths or threepennyworths, would not come under the provisions of these Acts so as to require the use of the patent medicine stamp, even when they are recommended for specific purposes." This interpretation of the law is new, and altogether unfounded. The Act applies to the sale of all medicines, in certain circumstances, whether the quantity sold be a pennyworth or a shillingsworth. The Board of Irland Revenue in this matter are like the judge who declined to admit the plea of the woman who had murdered her baby, that the victim was " such a very little one."

COCAINÆ HYDROCHLORAS, B.P.

On another page we give a statement made to us by Messrs. Howards & Sons, which opens up a question of some importance regarding what Cocaina hydrochloras, B.P., should be. If the ehemical formula given in the Pharmacopæia is to be relied on, the anhydrous salt (C₁₇H₂₁NO₄HCl) is required, but in the directions for preparation it is simply stated that the salt is to be recrystallised; no mention is made of the solvent to be used. It will be remembered that Dr. Lyons six months ago stated that the salt erystallised from water contains 9.6 per cent. of water, and that by crystallising from alcohol an anhydrous salt is obtained. We presume that the general rule holds good here that the aqueous solution yields large, and the alcoholic solution small, crystals; that being so, it will be found on reference to the pharmacopoial eharacters that both anhydrous and hydrated hydrochlorates are admissible. Since the anhydrous salt is $C_{17}H_{21}NO_4HCl =$ 339.5, and the hydrated $C_{17}H_{21}NO_4llCl 2H_2O = 375$, it follows that the latter, weight for weight, contains less cocaine than the former, amounting to nearly 10 per cent. We do

not desire to pose as pharmaceutical purists, but the point which we refer to is one which appears to require some official attention. It should be noted that when the Pharmacopœia was compiled there was still some uncertainty regarding the condition in which cocaine hydrochlorate existed, whether hydrated or not, and therefore the official formula may have been given provisionally. Those who prefer to stock the large crystal salt have this in their favour, while against them is the fact that the largest makers in the kingdom turn out the anhydrous salt in by far the greatest quantity. The assumption that the hydrobromide is a cheaper salt than the hydrochloride seems to be based on a miscalculation. The percentage of water named by Messrs. Howards is practically correct, but the suggestion that follows, that the hydrobromide is richer in cocaine, is not exact. According to Dr. Lyons, the molecular formula of this salt is $C_{17}H_{21}NO_4HB_22H_2O=420$, so that it contains 17 per cent. less cocaine than the anhydrous hydrochloride, and more than 7 per cent, less than the hydrated salt.

THE CONJOINT EXAMINATION IN MATERIA MEDICA.

IF we may judge from what a correspondent of the British Medical Journal says, the materia medica of the conjoint examination of the Colleges of Physicians and Surgeons is not a very trying ordeal. He states that, according to the synopsis and schedule for the first combined examination, March 11, 1886, there are only twenty drugs in the whole Pharmacopæia with the physical properties of which the candidate is expected to show practical familiarity. A medical student who is unable to recognise, for instance, any preparation of ammonium, sodium, or potassium (saving only the permanganate), who cannot identify nitrate of silver, or any salt of iron, or nitrous ether, quassia, glycerine, tannic or gallic acid, camphor, turpentine, nitrite of amyl, cantharides, or cod-liver oil need have no fcar, it would seem, of failing for this reason to pass a practical examination in materia medica at the new hall of examination on the Thames Embankment. He must be aware of the dosc and use of quassia, but not necessarily of those of gentian and calumba. He is excused any knowledge of the appearance, dose, or use of nitrate of potassium, podophyllin, copaiba, cubebs, creasote, santonin, pepsin, croton oil, or even castor oil. He must recognise the chlorides of mercury, and have theoretical acquaintance with its oxides and iodides (although only one iodide is now officinal); but he is no longer required to give any account of "blue pill," "blue ointment," or "grey powder" (unless these are supposed to be included under oxides of mercury). The white precipitate and the nitrate would also be beyond his ken. Such are some of the results of the combined wisdom of the two learned colleges.

DODONÆA LEAVES.

A sample of unnamed leaves has lately been sent to a Mincing Lane merchant to endeavour to find a market for them, and of these we recently obtained some specimens. The leaves are lanceolate, and range from $\mathbf{1}^1_2$ to $\mathbf{2}^1_2$ inches in length, and about 1 inch across at the widest part. At the base the lamina tapers gradually until it merges imperceptibly into the short petiole. The leaf surface has a varnished appearance. The taste of the leaves is very similar to that of solazzi juice, but it is followed by a slight bitterness. The leaves have been identified by Mr. Holmes as those of $\operatorname{Dodonæa\ viscosa}$, a plant belonging to the order Sapindaceae.

and known in Jamaica as switch sorrel. In Tahiti the leaves are said to have been put to a use similar to what laurel leaves were put to by the Romans, and by some sentimental people still. Mr. Bennett says that "fillits of the leaf were once used for binding round the heads and waists of victors after a battle, and during the pursuit of the vanquished." Why it has been sent to the English market it is difficult to say, for as far as we are aware it is not an active medicinal agent, and its tattered condition does not favour its application as a decoration for victors.

WHAT DOCTORS PRESCRIBE.

NDER this title the Lancet (May 1) in an editorial note comments on our analysis of 10,000 prescriptions. The following is what the Lancet says:-"The subscribers to THE CHEMIST AND DRUGGIST have been asked to send to the editor 10,000 prescriptions. And one of the members of the editorial staff of that journal has set himself the task of arranging this motley mass of statistics into such a shape that certain, in a measure, interesting facts are brought prominently forward. According to this somewhat haphazard, and by no means, we should think, representative mode of collecting physicians' prescriptions, the conclusion may be drawn that the inhabitants of this sometime favoured isle suffer largely from discases of the imagination. But the imagination is a function of the whole or some part of the nervous system. Hence a further deduction. This conclusion may not be a just inference, but the premisses on which it rests are these: Spirits of chloroform, sal volatile, glycerine, and syrup of orange-peel take high places, as drugs most frequently prescribed; to these we may add bromide of potassium, which ranks second only to chloroform. Most of these may be grouped under the heading 'placeboes.' Wine of ipecacuanha, sulphate of quinine, bicarbonate of soda, carbonate of ammonia, liquor ammoniae acetatis, potassii bicarbonatis, and spiritus ætheris nitrosi are the other members of the group of twelve drugs most frequently ordered. Several of these minister to the disorders of the respiratory tract, and the time of the year may have some influence on their use. But, as we said at the beginning, the information cannot be regarded as representative. If the statistics of some hospitals and dispensaries were taken, we believe that bicarbonate of soda, rhubarb, and gentian would exceed the other drugs in respect of frequency of prescription. Further, spirit of chloroform and syrup of orange-peel are mainly used as adjunets."

NEW YORK COLLEGE OF PHARMACY.—Professor Bedford reports as examination replies:—What is ergot? A species of rye over which a streak of lightning has passed.—What is calomel? The alkaloid of mercury.—A request. "I want to get my son through your examination if possible, but if he is not smart enough for that, then I shall send him to a medical college and make a doctor of him."

"ARE you successful, as a rule, in fever cases, doctor?" asked a druggist of a young physician. "Well—er, I haven't had many such cases as yet, but I have no doubt I shall be." "There is one kind of fever that I imagine you might cure without difficulty." "Ah, thanks. Do you mean searlet fever?" "No; life's fitful fever."

OIL recently spilled on a carpet or floor may be removed by putting on plenty of wheat flour or whiting to absorb the oil as much as possible. If the spot is near a seam, it is well to open the carpet and place the whiting underneath as well. The next day sweep up with a stiff brush the flour above and beneath the carpet, and put on plenty of fresh flour. If spots persist in remaining after this treatment, they can be removed with turpentine or benzine, or a preparation made by mixing a few ounces of soap in a gallon of soft warm water and adding $\frac{1}{2}$ oz. of borax. Wash the part well with a clean cloth, and the spot will soon disappear.

Medical Gleanings.

SALICYLIC-ACID TREATMENT.

REFERRING to the lectures of Professor Latham, Dr. J. Sinelair Holden, in the Brit. Med. Journ., May 1, instances the beneficial effects resulting from the administration of the acid in glycosuria. He concludes that his experience affords a proof of the statement made by Professor Latham, that " salicylic acid has the property of arresting the formation of both lactic acid and glucose by means of a chemical combination which it forms with the antecedents of those products." Dr. Holden evidently does not support Professor Latham in his stipulation that the acid must be administered in the free state, for he has found that patients do not eare to swallow a dose of it in 5 or 6 pills, and that in his hands the following mixture has given good results: Salicyclic acid 3ij., bicarbonate of soda 5j., carbonate of ammonia 5j.; mix in water 5j., and, when effervescence has subsided, add water to 5xij. An eighth or twelfth part to be taken three times a day. This is a soluble neutral mixture, and is not unpalatable when given in a wineglass of water, with a little tincture of orange-peel added. The ammonia prevents any depressing effects. This mixture, it will be observed, is a very similar preparation to those in which salicylic acid was prescribed when it was first introduced.

STRYCHNINE SPECIFIC FOR DIPSOMANIA.

THE British Medical Journal mentions that Dr. U. M. Popoff, of St. Petersburg (Vratch, 1886, p. 177), has employed nitrate of stryclinine in two typical cases of dipsomania, and obtained strikingly successful therapeutic results. In one of the patients (a very gifted man of letters, aged 40), the alkaloid was administered under the skin, in the dose of $\frac{1}{30}$ th of a grain at first (during a drinking bout) daily, then every other day, then twice a week, &c. The patient ceased to ask for drink after the second injection; within the next two days various morbid phenomena (headache, weakness, discomfort, &c.) disappeared. On subsequent occasions a few injections of to the or to a grain of strychnine rapidly removed craving, anxiety, irritability, agoraphobia, and other premonitory symptoms of a threatening dipsomaniac attack. The patient each time rapidly improved in all regards, and felt desire for work and society. In another patient, dipsomania disappeared under the internal administration of strychnine, the alkaloid being given for the two first weeks in doses of 1/30th of a grain, and for another two weeks in that of $\frac{1}{60}$ th, twice a day, in pills.

URETHAN.

Two French physicians (M.M. Mairit and Combinale) state that they have treated 37 insane persons with urethan, 300 doses having been administered, in from ½ to 5 gramme quantities for twenty-four hours. They selected cases only in which they were well acquainted with the mental condition of the patients, and mention the conditions of those to whom they administered the drug. The results of their observations are to the effect that urethan has no hypnotic effect in paralytic insanity and insanity from atheromasia, but in other kinds of madness (unless the patients are in a very exeited state, and then it has no hypnotic effect). Urethan produces a calm sleep, which lasts from five to seven hours, is undisturbed, and is not followed by disagreeable symptoms. The drug appears to have no effect on nutrition, even though administered for fifteen days. Regarding the nature and duration of the sleep produced they state that somnolence is generally produced quickly, although an interval of two or three hours may sometimes elapse, and if the sleep is sound to begin with it is correspondingly short. After about a week of its use it loses its influence, and must be discontinued for a few days.—Brit. Med. Jour.

DERMATOLOGICAL NOTES.

THE following notes by Dr. Unna, of Hamburg, are from the Monthly Periscope by Dr. W. Allan Jamieson, in the Edinburgh Medical Journal for the current month.

Sulpho-ichthyolate of Soda.

This contains a high percentage of sulphur, is easily soluble in water, and is absolutely innocuous. It is employed successfully in pityriasis simplex, schorrhaa sicea, ichthyosis, and desquamation after the acute exanthemata. A weak (2-per-cent.) addition of the ichthyol salt to the ordinary remedies used for eczema is always advantageous, favours a rapid desiccation, in particular in the freely secreting eczema of children. Still more efficacious is its internal exhibition in all those eczemas ascribed to a nervous origin. The dose for adults is 15 grains, for children 3 to 7 grains daily.

Resorcin.

This remedy possesses the advantage over ichthyol preparations of being without smell, yet is not so harmless, and must be cautiously used. A 10-30-per-cent, resorcin ointment or salve muslin quickly cures obstinate eczema of the eyelids, and eczema of the orifice of the nose and mouth. Resorcin is destined to play a much more important part in the therapeutics of skin diseases than it has so far done.

Powder Bays and Puffs.

The use of powder bags instead of mere dusting is another step in advance. The powder is placed as a thin layer between two folds of a material not in itself too thick, and this is quilted to keep the powder diffused. These bags or cushions are placed over various parts and secured in position, thus permitting a constant fine stream of powder to be directed on the parts. When used, no fat must be previously smeared on.

New Pastes.

Dr. Unna has done much in replacing fatty ointments with mild and soothing bases in the treatment of skin discases. He now proposes an extremely efficacious lead paste, of skin colour, for troublesome eczemas of the hands and fingers.

	Amyli oryzæ	 	 	• •	10.0
	Lithargyri	 	 		3 0 0
	Glycerini	 	 		30.0
	Aceti	 	 		60.0
Misce.	Coque ad	 	 		80.0

This must be compounded in small quantities and freshly. An ichthyol paste which rapidly dries is used in all varieties of intertrigo, in slight eczemas of the face and hands which do not bear fatty applications, and in extensive superficial eczemas:—

Ammo	niæ, su	pho-ic	hthyol		1.0-3.0		
Aquæ				• •	• •		10.0
Glycer	ini						10.0
Dextri	ni						10.0
Misce leni calore.							

This liniment-like mixture stiffens rapidly on the skin, smarts for a minute on eroded parts, but subsequently quiets the itching and pain. These pastes are, like the gelatine and glycerine preparations, permeable to the cutaneous transpiration; and when they dry, cool like powder. In rosacea, whether combined with acne or not, the internal administration of ichthyol preparations is strongly advocated:—

Ammoniæ,	sulpho-icl	thy ol	iei	 5.0	-10.0
Aq. destill.				 	20.0

Of this mixture, 15, 30, 50 drops, gradually increased, are taken night and morning in water. The taste is best overcome by free dilution.

In reference to the use of ichthyol in Germany, which we may say has in this country been tried and found wanting, the Berlin correspondent of the Therapeutic Gazette thus speaks:—The principal utilisation of the drug is said to consist in its specific anti-rheumatic virtues, though some clinicians are very positive in declaring the salicylic acid and its allied sodium salts as unquestionably superior. True, Dr. Schweninger, Professor of Diseases of the Skin at the University of Berlin, by the dictatorial grace of Bismarck, praises the drug as an anti-rheumatic of the highest rank, and Bismarck, having been relieved from untold suffering by the aid of iehthyol, did not hesitate to allow his illustrious name to figure in recommendation of the medicine.

TRADE-MARKS APPLIED FOR.

THE Trade Marks Journal publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1833, of opposition to such registration." All communications relating to patents, designs, or trade-marks to be addressed to H. Reader Lack, Esq., Comptroller-General of Patents, Lesigns, and Trade-marks, Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the " Trade Marks Journal," May 5, 1886.

- "SULFHALUMINE" and autograph; for a chemical substance. By Peter Spence & Sons, Manchester Alum Works, Munchester, and the Gool e Alum Works, Goole, 41879.
- "MILKALINE;" for a food, as substitute for milk; for rearing calves, &c.

 Bg E. F. Childe-Freeman, trading as "The Milkaline Manufacturing
 Co.," 104 Southampton Row, Middlesex. 45,403.
- "SAVEURINE," a botanic flavonrer, as food for horses and other animals; also by Mr. Childe-Freeman. 45,407.
- "JESSAMINE;" for illuminating, heating, and lubricating oils. By S. Bauner & Co., 8 Fazakerley Street, Liverpool. 47,920.
- "Snowdrop;" for illuminating, heating, and labricating oils. By A. Hopps & Sous, 7 Tithebarn Street, Liverpool. 48 020. Also "MATCHLESS" and "Snowflake;" for the sune. 49,187.
- "THE CHALLENGE SOAP" and autograph; for common soap; matches, and laundry preparations. 50,773.
- Manuscript label; for nutritive cream without grease for the hair; and antograph of the makers. F. C. Jackel & Cie, Central Station Hotel, Glasgow. 50.835.
- Circular label with pyramid in centre; for Burton spring liquor, an artificial mineral water. By Sutton & Phillips, munifacturing chemists, Stowmarket. 50.836.
- Label for the Edinburgh Bouquet, with representation of Sir Walter Scott's monument, Edinburgh. By Edwin Pass & Son, 103 Princes Street, Edinburgh. 50,892.
- Tree-trunk between "Ker" and "Pop;" for remedy for chilb!ains. By T. Christy & Co., 155 Fenchurch Street, E.C. 50,893.
- A figure resembling top of a blast furnace; for glass bottles. By Dan Rylands, Barusley, Yorkshire. 51,041.
- "MILITARIUS;" for a preparation for the moustache. By E. Pass & Son, Edinburgh. 51,070.
- A double-cagle under a star, with three stars on breast, and with implements in feet; for caustic soda. By G. Reich & Co., Newcistle-on-Tync. 51.126.
- A figure exactly the same as the above No. 51,041 (applied for by Mr. Rylands); for mineral and accated waters, &c. By J. Mills & Son, Ronel Road, Bermondsey, London, S.E. 51,180.
- "D. THOM'S CASTILE SOAP;" for common soap and perfumed soap; and "THOM'S CASTILE SOAP;" for the same. By D Thom & Co., Pendleton, Laneashire, 51,202-51,205.
- "ANTI-CORROSIVE SUBLIMATE" and monogram; for substance used to prevent pitting and corrosion in steam boilers. By J. K. Sinton, 7 Grassmere Terrace, Gateshead. 51,212.
- Label, with a limb in centre; for mint sauce. By C. W. Shepherd, 3 Brook Street, Ilkley. 51,253.
- "ULCANOD" in manuscript; for a surgical dressing, consisting of pure peat powder combined with odorating and antiseptic substances. By R. Park, M.D., 275 Argyle Street, Glasgow.
- "FALCON BRAND;" for chemical substances used in manufactures, photography, or philosophical research; anti-corrosives and anti-foulers, &c. 51,266. Also for raw or partly prepared vegetable, animal, and mineral substances used in manufactures, including oils and turpentine for mixing with paints. 51,267. And for illuminating, heating, and lubricating oils. 51,263. By Wilkinson, Haywood & Clark, 7 Calcdonian Road, King's Cross, London.
- Falcon on shield, within circle of wording; for same as preceding paragraph. By same applicants. 51,279-51,281.



PARTNERSHIPS DISSOLVED.

ARTER & DENDY, Bishops Sutton, near Bristol, annatto munifacturers.

Bates, W. & A., Leicester, india-rubber manufacturers.

HANDEL & Co., Teddington, aerated-water manufacturers.

HUTCHEON, HENRY STONE, and JOHN WILLIAM PARE, Derby, physicians.

FIRST MEETINGS.

- CLAPP, JOHN WILLIAM, Nantyglo, Monmouthshire, surgeou. Official Receiver's Office.
- EARP, JOSEPH GUEST, Birmingham, oil and colour merchant. May 13. Official Receiver's Office, Birmingham.

ADJUDICATION.

ODDY, JOHN, Cleckheaton, veterinary surgeon.

NOTICE OF DIVIDEND.

WALKER, WILLIAM, and WILLIAM EDWARD WALKER (trading as "Wm. Walker & Son"), merchants, seed crushers, oil refiners, &c. Final dividend of 103d. May 10, 188 High Street, Hull.

APPLICATION FOR DISCHARGE.

HARRISON, J., Sunderland, chemist and druggist. Sunderland Court, May 27.

RECEIVING ORDER AND DATE OF PUBLIC EXAMINATION.

STEWARDSON, WILLIAM, Harthill, Yorkshire, aërated-water manufacturer.
May 2), at 11.30.

INTENDED DIVIDENDS.

- JOHNSTONE, J. F., 260 Bnrdett Road, Bow, and elsewhere, chemical manure manufacturer. At the High Court of Justice in Baukruptey. May 11. Chief Official Receiver, 33 Carey Street, Lincoln's Iun.
- McCardell, J. A., Manchester, drysalter. Manchester Court. May 12.
 RATH, A. J., Manchester, manufacturer of india-rubber goods. Manchester Court. May 12.

BANKRUPICY.

JOHN DRUMMOND, 6 George Yard, Fenchurch Street, and Southend, Essex, Drug Merchant.

THE first meeting of creditors under this failure was held on Thursday, under the presidency of Mr. H. Brougham, one of the Assistant Official Receivers. The accounts filed show fully secared debts 3,714l. 6s. 8d.; unsecured, 1,648l. 6s. 11d.; assets, 2,292l. 13s. 4d, including a sum of 2,267l. 13s. 4d., an estimated surplus from securities in the hands of creditors. Full details of the accounts have already appeared in THE CHEMIST AND DRUGGIST. The failure is attributed to loss by a fire on the City premises, and inability to realise land and house property at Southend. The debtor has already been adjudged bankrupt. The debtor's solicitor said the creditors agreed at a private meeting to accept a secured composition of 5s. in the pound. He had got a surety, and his proposal now was 2s. 6d. in the pound in one month, and the other 2s. 6d. within three months of the Court sanctioning the scheme. The solicitor added that although the accounts showed a surplus, the figures were based on the money expended on the property, and as a fact the estate had no realisable value. Considerable opposition was offered to the scheme by certain creditors, who held it was inadequate, and that the debtor's conduct required strict investigation. Nineteen proofs were put in, but only six were available for voting The voting power was equally divided, so no resolution was carried, and the debtor's solicitor agreed to apply for power to call a new first meeting.



[The following List has been compiled expressly for The CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, 4 South Street, Finsbury, London, and at Paris and Brussels.]

Applications for Letters Patent:-

Specifications published during the month of April:—Postage, 1d. each extra.

1885.

Amended Specification.

900. F. M. Lyte. Parifying and deodorising sewage, &c. 6d.

3,441. C. R. Huxley. Ammoniated soaps. 4d.

3,463. W. R. Lake. Stoppers for bottles, &c. 8d.

3,696. W. Lawson. Capsules, &c. 11d.

3,810. A. R. Stocker. Stoppers for bottles, &c. 8d.

4,228. T. Bayley. Manufacturing oxide of iron, &c. 6d.

4,235. B. Harrison. Stoppers for bottles, &c. 8d.

4,274. II. Gaskell. Treating bicarbonate of soda. 8d.

4,420. H. L. Phillips. Stoppers for bottles, &c. 8d.

4.433. J. H. Clark. Blowers for distributing disinfecting powdered mixtures. 8d.

4,473. E. Langen. Treating semi-liquid substances with purifying liquids, &c. 8d.

4,478. W. E. A. Hartmaun. Treating waste liquors from the manufacture of timplates. 6d.

4,500. E. E. Hanslow. Stoppering for bottles. 8d.

4,669. W. V. Wilson. Manufacturing acetate of amyl. 4d. [4,748. T. II. Sclater. fertiliser. 6d. Combined insect destroyer and soil

4,758. B. H. Remmers. Starch, &c. 11d.

4,783. W. Fairhurst. Bottling aërated waters. 8d.

4,902. A Neilson and J. Snodgrass. Obtaining ammonia from carbonaccous minerals. 8d.

4,971. C. Maples. Spring boxes for powders. 6d.

5,130. H. Codd. Glass bottles. 8d.

5,382. A. G. Brookes. Distilling glycerine, &c. 8d.

5,969. W. Bratby and J. Chadwick. Forcing syrups, &c. into bottles. 8d.

5,998. M. S. Gosling. Soap paste. 4d.

6,054. F. Maxwell-Lyte. Sewage purification processes, &c. 6d.

8,973. L. Mond. Separation of ammoniacal products, &c. from furnaee gases.

12,745. W. R. Lake. Ammonium chloride and potassium sulphate. 4d.

15,055. A. R. Stocker. Stoppers for bottles, &c. 6d.

15,056. A. R. Stocker. Stoppers for bottles, &c. 8d.

15,092. W. J. Bishop. Mixing liquid disinfectants with water. 8d.

15,415. S. B. Opdyke. Nozzles and stoppers for bottles, &c. 8d.

15,528. C. E. Bichel. Explosive compounds. 4d.

15,653. J. Needham and B. Lewis. Tooth-brush stand. 6d.

15,678. W. E. Heys. Chemical balances. 6d.

15,934. F. J. B. Raken. Syphon bottle for aërated beverages. 6d.

1886.

491. L. Dove. Stoppering bottles, &c. 6d.

513. E. Rowlands and T. Ferguson. Bottling aërated liquids. 8d.

719. A. Osenbrück. Anhydrous ammonia, &c. 8d.

888. T. Herb. Bottles, &c. 6d.

Personalities.

Mr. W. R. Fowler, late of Boston, now of 122 Queen Street, Portsca, has opened a branch business at 2 Victoria Road, Havelock Park, Southsea.

MR. JOHN LORIMER, of the firm of Lorimer & Co., manufacturing chemists and specialists, has left England for a short business tour in the United States. He can be addressed at the Grand Central Hotel, New York.

Mr. Benjamin Robinson, of Pendleton, Manchester, has been elected for the second time chairman of the committee of Hope Hospital, Eccles, Manchester, which is one of the finest Union institutions in the kingdom, being built four years ago on the pavilion system, and contains beds for upwards of 300 patients, and accommodation for 40 nurses and other officers.

Trade Notes.

NEW COMPANY.—Cawley & Co. (Limited), capital, 60,0007. in 17. shares. Formed for the purpose of purchasing and working the Park & Cockley Fuller's earth Works, Nutfield, Surrey.

MESSRS. THOS. TOMLINSON & SON, chemists' agents, &c., have removed from Corporation Street to 9 New Cannon Street (off Market Street), Manchester.

THE Excise interference with the sale by chemists of Coleman's Meat and Malt Wine has induced the makers of that popular preparation to take a vigorous step, which will probably serve in the end to increase their business. They announce by advertisement that they will pay the wine licence for any chemist who will take a certain quantity of their article. The Board of Inland Revenue is not likely to object.

MESSIS. McKesson & Robbins, of New York, are now advertising in our pages a long line of their gelatine-coated pills, for which they have an immense trade in America. Many of these are made expressly for this market in accordance with the formula of the British Pharmacopæia. Messrs. S. Maw, Son & Thompson, and other houses, are holding a complete stock, and Mr. W. J. Evans, who represents the firm, may be addressed at Messrs. Maw's, 11 Aldersgate Street.

COCAINE SALTS.—We have received from Messrs. Howard & Sons samples of crystallised hydrochloride and hydrobromide of cocaine, both of which we find to be perfectly free from impurity. Messrs. Howard inform us that they have made the crystallized hydrochloride since cocaine was introduced into therapeutics, but that they never send it out unless it is specially ordered. They maintain that the B.P. requires an anhydrous salt, whereas the crystallised salt contains 98 per cent. of water, and is therefore considerably weaker, "nearly 12 per cent.!" Cocaine hydrobromide is in pretty scale-like crystals, and is very soluble. The makers state that this, owing to its smaller percentage (8 per cent.) of water, is cheaper in proportion than Cecainæ hydrochloras eryst.

PAPAIN-FINKLER.—The special preparation of rapain juice manufactured according to the process of Dr. Finkler, of Berne University, is put forward as of a degree of attenuation which makes it suitable for internal administration. Papain-Finkler, when first placed on the market, was a brown substance, and on that account mainly, as being so different from the parayotin described by Würtz, it was not received with favour. The manufacturers now prepare and send out only white Papain-Finkler. Of this and full-strength papain we have received samples. The latter is perfectly soluble in water, and gives all reactions of parayotin. It curdles milk immediately when added to it, and bas powerful digestive properties. The weaker preparation is without action on milk, and appears to possess about one-third of the digestive power of the stronger preparation; but it is noticeable that, while the peptonised solutions formed by the strong papain are quite sweet at the end of two days, the solutions from the other are far on the road to putridity by that time. Mr. B. Kuhn, St. Mary-at-Hill, is agent for these preparations.

Trade Report.

It should always be remembered that prices quoted in this section are as nearly as can be ascertained the lowest that are actually paid for bulk quantities. Considerable allowances have to be alled in many cases before ordinary prices can be ascertained, and for many drugs it must be recollected the range of quality is very wide.

MINCING LANE, May 6.

CINCHONA BARK.—The quantity offered in public sale, 2,978 packages, was slightly in excess of that catalogued on April 20, but the quality left much to be desired. We noticed some good parcels of root, Succirubra, Officinalis. and Hybrid, and a very few lots of fine bright druggists' quill, but the great bulk of the supply consisted of common Ceylon chips and branch, which might with advantage have been left on the tree for some time longer. Of South American bark there was a very limited supply, viz., 373 packages-the smallest quantity of this kind which has been offered for many months. This bark included a case of fine silvery druggists quill, which realised 2s., and some very fair Calisaya quill, sold at 1s. 1d. to 1s. 4d. Cuprea realised 71d. per lb. Little animation was shown during the sales: prices were rather irregular, but lower on the whole, and at the close the decline became marked. The unit value was $4\frac{1}{2}d$. to 5d, a fall of about $\frac{1}{4}d$. Ceylon Bark sold as follows:—Succirubra, branch, $1\frac{1}{2}d$. to 7d; branch, mixed with chips, $3\frac{1}{2}d$. to $6\frac{1}{2}d$: chips, common to good, $3\frac{1}{2}d$. to $10\frac{1}{2}d$.; root, $4\frac{1}{2}d$. to 18. 64. Officinalis, branch, young and weak to fair, mixed with chips, 2d. to 10d.; chips, $4\frac{1}{2}d$. to 18. 1d.; root, 7d. to 18. 8d. the latter a very fine bright 18. 1d.; root, 7d. to 18. 8d., the latter a very fine bright parcel; renewed, common to fine, 8d. to 2s. 2d. Hybrid, 21d. to 1s. 6d. Some draggists quill from Madras realised 11d. for dult, 1s. 7d. for time bright quill of uneven length and thickness, 1s. 1d. to 1s. 5d. for good strong officinalis, and 2s. 1d. for very good rich renewed. Of Java bark, only 20 bales, imported from Amsterdam, were catalogued, and all sold at 7d, to $10\frac{1}{2}d$, for dull chips and branch. One bale renewed chips fetched 1s. 4d. per lb.

ACID (CITRIC).—The price of 2s. 2d. per lb. for spot is maintained, although several operators are doing their utmost to bring it down. The position of the article is considered a good one; the stock is said to be small and in very firm hands, little is offering for immediate delivery, and it is quite possible that the increased demand which may be looked for with the approach of summer will cause an advance in price. Makers' price is still 2s. 4d. per lb.

ACID (OXALIC) remains lifeless. The nominal quotation is 4d. per lb. less $12\frac{1}{2}$ per cent. discount.

ACID (TARTARIC) remains firm at the prices quoted in our last report.

AMMONIA (SULPHATE) is again cheaper, grey 24 per cent. being obtainable at 101, 7s. 6d. in London, or 101, 12s. 6d. in Hull. A fair business has been done in the article, and the exports from Hull during the month of April show a considerable increase over the corresponding month last year, the figures being 1,964 and 1,393 tons respectively.

AMMONIA (CARBONATE) is quite neglected, at 5d. per lb., less 22; per cent.

ALUM.—Loose lump is quoted at 5l. 10s.; ground, in bags, at 6l. 2s. 6d. per ton, ex warehouse. There is a limited business doing for home consumption, but the demand for export is almost nil.

ARSENIC.—Powdered white is obtainable at 9s. to 9s. 3d. per cwt., landed.

BLEACHING-POWDER is still quoted at 71. to 71. 5s., ex warehouse, but hardly anything is doing in the article.

BORAN is quoted at 30% for English and 23% for Foreign, but the market is dull. The yield of boran in California and Nevada during 1885 has been 4,500 tons. The deposits of boran in the United States are said to be practically inexhaustible, but the use of the salt is constantly increasing.

Some years ago it was exclusively employed in the mannfacture of iron; it is now also used for glazing iron and stone ware, in soap-making, for softening water, and recently for preserving meat and fish.

LEMON JUICE (CONCENTRATED).—English manufacturers of citric acid have received during the month of April only 35 pipes of juice, representing about 5 tons citric acid. The arrivals in April 1885 were 585 pipes, in April 1884, 520 pipes, and in April 1883, 320 pipes. The juice is now quoted at 321. 10s. f.o.b. Messina, and the tone of the market is very steady. The stock in Sicily is computed at about 2,000 pipes.

POTASH.—In *Bichromate* there is little doing, the price being still $3\frac{1}{2}d$, per lb. *Chlorate* is offered sparingly, and not obtainable under 7d. for spot, but June delivery may be had at $\frac{1}{4}d$, less. *Prussiate* neglected, at $7\frac{3}{4}d$, per lb.

QUICKSILVER has been advanced by the importer to 61.5s. per bottle; second-hand holders quote 61.3s.

SAL ACETOS steady, but quiet, at 6d. per lb.

SALTPETRE.—A limited business is doing; prices remain the same, viz., 21s. 3d. for English refined in barrels, 22s. 3d. for ditto in kegs. On April 24 our stock amounted to 1,470 tons, against 2,700 tons in 1885, and 2,380 tons in 1884.

SODA—Crystals are again weaker, holders showing a desire to press them on the market, and being therefore obliged to accept somewhat lower prices; 47s. ex ship in London, and 40s. 9d. at Tyneside are the rearest values. In Ash very little is doing, but the price remains unaltered at 1\frac{3}{3}d. per degree per cwt. For Bicorbonate there is a fair i quiry: the quotation is now 7l. 10s. landed. Coustie unchanged, at 8l. for cream ex warehouse, 8l. 5s to 8l. 10s. for white 60 per cent. Nitrate quoted at 1ll. for prompt delivery; in Liverpool 10l. 5s. to 10l. 10s. is accepted for spot, heavy arrivals having just been placed on the market.

SUGAR OF LEAD is offered in rather limited quantities, but the denand is not large. Foreign white is worth 22s. 6d.

SULPHATE OF QUININE has been quiet, with small transactions at the recent decline. The official quotations now are as follows: Howards' in bottles, 3s.: bulk, 2s. 10d. Whiffen's, 2s. 9d. and 2s 7d. French, in bottles, 2s. 11d.; German, Dutch, and Italian, in bottles, 2s. 8d. to 2s. 9d.; in bulk, 2s. $7\frac{1}{2}d$ to 2s. 8d: and of other einchona preparations: British quinine hydrochlorate, 3s. 6d: valerianate, 4s.; hydrobromate, 3s. 4d: phosphate, 3s. 3d: salicylate, 3s. 3d. Quinidine sulphate, British, in bottles, 1s. 1d.; in bulk, 11d. Cinchonine, British, in bulk, $9\frac{1}{2}d$; sulphate of ditto, British, in bottles, $4\frac{1}{2}d$; bulk $3\frac{1}{4}d$; German, $3\frac{1}{4}d$, and 3d. Cinchodine sulphate, British, 61d. and 51d.; German and Italian, $5\frac{1}{3}d$. and $4\frac{1}{3}d$. Cinchonamine sulphate, British, in bottles, 25s. The Oil, Paint, and Drug Reporter, commenting upon the speculative movements in quinine in the United States, mentions that the prime movers in the matter were American and German manufacturers, the game being started by a domestic quinine manufacturer, who offered spot delivery below the current market. The German makers have been resting on their oars for the past three months, waiting for the tide to turn in their favour, while their works continued to run at the usual capacity, and stocks accumulated, with no indication of an early outlet The American practice of finding a market and forcing a break in foreign stocks did not long remain a secret. The information being wired abroad, some German manufacturers took a hand in the game, Zimmer, according to uncontradicted reports, being the first to enter the field with large offerings for future delivery, about 55,000 oz. of which were taken at 60c. by speculative holders of spot goods in New York. This movement was followed by another reported sale by a house in Londou of 50,000 oz. for shipment to an American quinine manufacturer. Next came a purchase of 50,000 oz. by a Stuttgart commission house for another American manufacturer at 60c. and 61c. delivered in New York, and said to be B. & S. quinine. The latter transaction caused a stampede among the other German makers, Brunswick being the first to follow with free offerings for April, May, and June, all of which were quickly taken up at prices equivalent to 60c. and 62 c. in New York, according to time of shipment. The principal buyer in this case was a New York speculator, who subsequently unloaded his spot supplies, consisting of

30,000 oz., at 60c, having covered his wants for April delivery at the same price. Not to be outdone, it is said that Jobst figured in the deal to the amount of 25,000 oz. on American account, while the buyers unloaded similar spot supplies to domestic quinine makers; but this last report has been flatly contradicted. The unusually heavy business, at all events, has caused a much firmer feeling to prevail. If the spot supplies, as is thought to be the case, have all been released by outsiders, who are now depending on futures to get their money back, the market is certainly placed on a better basis. The heavy purchases by American manufacturers also afford conclusive evidence that the market cannot go any lower, at least while the fresh supplies last. The American makers no doubt find it more profitable to buy other brands for packing under their own label, than to buy barks. These periodical spurts may be continued so long as they can buy quinine at a better advantage than to manufacture; and if the foreign makers are running at a loss, as claimed, it is only a question of time when forbearance will cease to be a virtue, and the exigencies of the situation will compel them to take other measures of meeting American competition.

SULPHUR neglected, and quoted at 8s. to 8s. 6d. per cwt. for rolls, and 9s. to 10s. for flowers.

VARIOUS CHEMICALS.—It is worthy of note that Messrs. Howards & Sons in their price-list just issued have not increased the price of a single article, but have reduced those of thirty-two, mostly coeaine and quinine preparations. following are the present quotations: Ether, methylated, 1s. 3d.; Ammonii Bromid. 1s. 11d.; Calcii Benzoas, 8s.; Cocaina *cryst.* in 1-gramme tubes 2s., in 10-gramme vials 1s. $11\frac{1}{2}d$. Cocainæ hydrochloras in 1-gramme tubes 1s. $4\frac{1}{2}d$., in 10 gramme vials 1s. 4d.; ditto crystallised, in 1-gramme tubes 1s. $4\frac{1}{2}d$., 10-gramme tubes 1s. 4d.; Ferri et quininæ citras, P.B., in ordinary vials 11d., in $\frac{1}{2}$ -oz. vials 1s, in bulk 10d.; Ferri et strychninæ citras, 1s. 2d., iodoform, cryst. or powdered 16s., precipitated 16s. 6d.; Sodii benzous, 8s.; Urethane, in 1-oz. vials 1s. $7\frac{1}{2}d$. It should here be noted that benzoate of cocaine should be freshly prepared, as required, by dissolving 3 parts of the alkaloid and 1 part of benzoic acid in the required quantity of distilled water.

CUTCH is without business, at nominally unchanged quotations. The total exports from Burmah from January 1 to May 1 amount to 6,120 tons, against 6,820 tons in 1885 and 8,820 tons in the same period in 1884.

GALLS.—Both *Chini* and *Japan* kinds are offered more liberally, but none were sold in auction.

GAMBIER is firm; the London quotation for good block is 21s. $7\frac{1}{2}d$.; in Liverpool 22s. 6d. has been paid, ex warehouse. Good loose cubes are worth 30s. per cwt. The total shipments of gambier from Singapore to Europe were 6,825 tons during the first three months of the current year, against 9,000 tons in 1885.

SHELLAC has again declined in value, and the tone of the market is one of great dulness. Button showed a downward tendency at the commencement of the week, when a parcel of 300 chests, fourth quality, on forward delivery, changed hands at 32s. per cwt. There was a large supply of button lac offered in public sale on Tuesday, and prices on that oecasion gave way another 3s. to 5s. per cwt. for third and second qualities. Second orange is 4s. cheaper, and Garnet 2s. to 3s. The following prices were paid during the auction for parcels pressed for sale without reserve, these being the only lots for which there was any demand:—Fine orange, A,SSL inferior at 56s.; second orange, VSO fine bright at 50s, I in diamond good at 46s. to 47s., SCSR good bright 47s., MJ diamond fair bright 46s. to 47s., GN diamond 47s. to 45s., AT diamond, livery, 45s, GA diamond, livery, 44s.; Garnet, AC blocky 42s.; Button, CA house 41s. to 50s.; PB house, good third 38s. to 40s., fourth 30s. to 35s. The shipments from Calcutta remain large, 11,900 cwts. having been forwarded to the United Kingdom in April 1886, against 13,500 cwts. in April 1885. The London shellac statistics for April also afford little hope for an improvement, or even a cessation of he downward movement. There were landed in this port luring the month of April 6,544 chests, including 4,096 chests range, against a total of 4,210 chests last year. The April leliveries were 3,563 against 3,083 chests, and our stock in varehouse, which amounted to 49,742 ehests last year, has ow grown to 64,100 chests.

STICKLAG neglected; common qualities only were sold in anction, 25s. to 25s. 6d. being the price paid for inferior blocky Siam, and 21s. for ordinary dusty Kurrachec.

Turmeric depressed, and cheaper for some varieties. *Madras* fingers, good bright in coat, fairly bold, can be had for 15s.; bold, but dull-coloured ditto at 11s.; bulbs, whole but wormy, 13s. 6d.; split, sound ditto. 11s. 6d. per cwt. *Cochin* in split bulbs fetches from 8s. 6d. to 8s. 9d., and *Bengal*, rather lean, dark breaking fingers, sound, 14s. 6d. to 14s. 9d. per cwt.

ISINGLASS.—The monthly sales took place on April 30, when a small total of about 370 packages was offered, of which only 140 found buyers at irregular prices. Penang leaf of good quality is 2d. higher, and sold at 3s. 5d.; other qualities fetched from $4\frac{1}{2}d$. to 2s. 9d. Penang tongue is also dearer, at 3s. 9d. for fine, stout, pale, but Penang purse is lower, at $4\frac{1}{2}d$. to 1s. 4d. according to quality. Bombay pipe sold at $6\frac{1}{2}d$. to 3s. 1d., being mostly lower; old tongue at 1s. 6d. to 1s. 7d., which was dearer; purse $2\frac{1}{2}d$. to 1s. 4d. Kurrachee sorts steady, at 1s. 4d. to 2s. 1d. Saiyon leaf fetched 4s. 1d. to 4s. 2d.; pickings 3s. 7d. to 3s. 8d. Saiyon pouches are without any interest. Brazil rather cheaper.

GUM ARABIC.—A large supply of East Indian, Cape, Mogadore, and Australian gums was offered in public sale to-day, and prices experienced a considerable decline all round; the reduction in value averaging 12s. to 15s. on Amrad, 15s. to 20s. on Aden, and 10s. to 15s. on Cape. Ghatti only gave way about 3s. or 4s. per cwt. The following prices were paid: Aden, fine frosty, partly bold to small dark mixed, 99s. to 65s.; red olibanum scented, 73s.; fine siftings, 63s. to 70s. Amrad, dark to fine pale, 40s. to 75s.: very low to medium blocky, 8s. to 20s. 6d.; siftings, 10s. to 19s.; Ghatti, good pale, 40s. to 45s. 6d., fair to common dark, 37s. to 12s.; Cape, 96s. to 39s.; Australian, 57s. to 73s.; Senegal, 106s. to 110s.

GUM COPAL.—Steady. Manilla, pale, picked scraped to dark chips realised 75s, to 22s.

GUM DAMAR.—68 cases *Batavia* fine pale but small sold without reserve at 83s. to 83s. 6d.

GUM KOWRIE.—Without demand at previous prices, fine picked, 12/. 5s.; good to fine clean scraped, 73s. to 95s.; ordinary rough to fair, partly unscraped, 33s. to 67s.

GUM OLIBANUM.—A good supply, of 304 cases, was offered, but the demand was less lively than before, and only some lots of inferior quality changed hands. Dark woody pickings at 7s. to 11s.; siftings, 12s. to 14s. 6d.; dust, 4s.

GUM TRAGACANTH.—14 packages bought in. 26 cases low horny from Calcutta sold, without reserve, at 5s.

COCOANUT OIL is unchanged for *Cochin*, which is still quoted at 281. 10s. to 291. for pipes on the spot, while *Ccylon* also remains stationary at 241. 15s. for pipes and for puncheons, and 251. 10s. for hogsheads. *Mauvitius*, of which the nominal quotation had been stationary for some time, has suddenly given way, and is now offered at 251. 5s. Little or nothing is doing in the article.

COTTON OIL.—A firmer tone prevails. Crude is quoted at 141. 15s. in London: 131. 10s. in Hull. Refined in London at 161. 10s. to 171. 10s. for spot, 161. 15s. for near delivery, 171. 10s. for distant delivery. The Hull price is 161. 2s. 6d. spot and near delivery, 161. 15s. for May-August.

LINSEED OIL.—Improving. The London quotations are, for spot, pipes, waterside at 19l. 7s. 6d., land 19l. 10s.; barrels 19l. 15s., month 19l. 15s., May-August 19l. 15s., September-December 19l. 5s. Hull. spot 19l., barrels, 19l. 7s. 6d., month 19l., May-August 19l., September-December 19l.

OLIVE OIL has maintained its position and closes steady, with a fair demand for the *Mogadore* variety, which is quoted at 331.; *Spanish* at 391. to 401.

PALM OIL.—The London market is quiet, nominal quotation being 23/. for fine *Lagos*. In Liverpool sales have taken place at 20/. for *Lagos* and 18/. 10s. for *Benin*.

PETROLEUM OIL.—Business in this article is lively, but prices remain unchanged except for distant delivery, which is

a shade easier. To-day's quotations are:—Spot $5\frac{7}{8}d$, to 6d., month $5\frac{7}{8}d$., September-December 6 1-16d, to $6\frac{1}{8}d$.

RAPE OIL has shown some decline since our last report, but the closing position is rather steadier, English brown on the spot being held at 19l. 15s. to 19l. 17s. 6d., May-August 20l. 5s., September-December 20l. 15s. Refined English on the spot, 21l. 5s. to 21l. 7s. 6d.

TURPENTINE.—The market continued to give way until the middle of this week, when a firmer tone became noticeable and prices began to recover. The closing quotations for American spirit are:—Spot 26s., September-December 25s. 9d.

Cassia Lignea without much business, at 26s. per cwt. Fresh arrivals of some importance have taken place, bringing up our stock to 109,526 boxes. An astounding statement having recently been made, on apparently good authority, to the effect that there were not more than 10 lbs. of true cinnamon in the United States, the rest being common cassia lignea sold as cinnamon, the Oil, Paint, and Drug Reporter maintains that this statement is entirely wrong. The imports of true cinnamon in the States amounted to 224 bales in 1884 and 327 bales in 1885, and there are said to be at least 300 bales in stock now. The domestic consumption is small, and confined principally to druggists' use, the balance being reshipped to Spanish America.

CHILLIES easy, at 30s. to 37s. for dull and dark to fair bright Zanzibar.

CLOVES have further improved their position; in public sale only a single lot of dark Zanzibar was offered and taken at $7\frac{1}{3}d$. per lb., but privately some transactions at $7\frac{1}{8}d$. and 8d. per lb. for good bright quality are reported. No arrivals have taken place lately, while deliveries continue to reduce our stock, which now does not exceed 6,552 bales of all kinds, against 16,258 bales last year. It should be noted that whereas 15,778 packages arrived in Loudon during the first seventeen weeks of 1885, the arrivals this year have been limited to 1,779 bales. Amboyna cloves are worth $8\frac{3}{8}d$. to $8\frac{1}{4}d$. Java $7\frac{3}{4}d$. to 8d.

GINGER.—On Wednesday a heavy supply of new Cochin was offered, which met with a restricted demand; washed being rather lower, except for fine varieties, which sold at 1s. advance. Cut Cochin is steady. Shrivelled sold at 20s.; rough euds 30s. to 34s.6d.; ordinary medium rough, 32s.6d.; washed, small to bold, 36s.; partly cut, 52s.; small to bold, 53s. to 82s. 6d; cut, small to bold 55s. 6d. to 92s. Jamaica ginger, of which a fair supply of the fresh crop was offered, is firm for good quality, but neglected for inferior kinds; common dark Rhatoon, 37s. to 42s.; washed, common to fine, 50s. to 84s. The following are the present stocks of ginger in the London warehouses as compared with last year:

				Present Stock	Stock in 1885
West India (p	kgs.)			1,342	13-2
Cochin and M	alabar	(cases)		3,295	2,509
11	23	(bags)	٠.	10.657	7,218
Bengal (bags)				4.007	
African "				596	1.292

MACE is much sought after, and commands full rates, Our stock is getting lower, and does not exceed 312 packages in first hand. In sale on Wednesday one bag Ceylon realised 1s. 3d. per lb., and 25 packages West India were also sold, at ordinary to fair, 1s. 3d. to 1s. 6d.; good, 1s. 7d.; fine bright, 1s. 11d. to 2s. 1d. per lb.

NUTMEGS are a little cheaper, *Penang* selling at 1s. 9d. to 1s. 10d. for 113's to 107's; *Bombay* at 1s. 11d. for 89's; *West India* at 1s. 9d. to 3s. 1d. for 97's to 67's; 1s. 2d. to 1s. 4d. for long 126's to 98's.

Pepper dearer, with advancing tendency; $7\frac{2}{3}d$. to $7\frac{1}{4}d$. has been paid for ordinary to fair black Aleppey, $11\frac{5}{2}d$. for good white Singapore, and $10\frac{1}{2}d$. for good white Penany. Ten tons black Singapore, to arrive per April steamer, have changed hands at $7\frac{1}{4}d$. per lb. Our stocks of pepper as compared with last year are: black, 2,061 against 2,052 tons; white, 510 against 766 tons.

PIMENTO.—As anticipated, the firm position of the article has not been maintained, and dark to good bright *Jamaica* can now be obtained at 2d. to 2\frac{1}{4}d. per lb. Our stock is 28,758 bags, against 31,875 bags in 1885.

The following were the Stocks in the Port of London on May 1, with those for the corresponding date of the previous year:—

	1886	1885		1886	1885
Aloescs	3,606	3,120	Gum (cont)—		
"kegs	12	35	Damarpkgs	5,421	3,461
"gourds	50	198	Galbanum ,	10	27
Aniseed, Star chts	326	207	Gamboge ,	95	156
Arrowrootcks	13,737	12.649	Guaiacum "	29	82
,, bxs & tins	2,839	4,776	Kino,	139	172
Balsamcks, &c.	546	494	Kowrietns	1,815	1.251
Bark, Medicinal			Masticpkgs	116	229
cks & cs	5,365	3,549	Myrrh, E.I.	310	221
" srns, &c.	58,049	74,829	Olibanum "	5,160	5,783
Boraxpkgs	739	525	Sandarac ,,	1.553	1,896
Bees' waxbls &			Tragacanth .,	1,371	1,892
srns	1,043	860	Indigo, E.I chts	18,996	17,264
,, cks & cs	1,191	617	Spanish srns	3,519	3,548
,, cakes	105	3	Ipecac cks & bgs	176	212
Wax, Jap. vgtbl. pk	1,967	556	Jalapbls	154	234
Camphorpkgs	6,985	9,486	Nux Vomica pkgs	951	927
Cardamomschts	916	926	Oil-		
Cochincal, srns, &c.	8,394	10,105	Castorcks	562	508
Cocc. Ind. bgs, &:	334	405	,,cs	7,221	5,359
Colombo root pkgs	907	1,360	Palmtns	157	168
Cream tartareks	43	57	Cocoanut,	2,124	3,442
Cubebsbgs	15	185	Oliveeks, &c.	1,538	1,470
Dragon's blood chts	128	144	Anisecdcs	262	305
Galls, China & Jap.			Cassia,	237	112
cs	3,313	2,440	Opiumchts, &c.	1.940	2,202
Trky & Prsn sks	5,707	4,607	Plumbago ths	3,911	2,065
			Rhubarbchts	1,678	944
Gum-			Saltpetre, Nit. Pot.	1 407	0.540
Ammoniac pkgs	286	220	tons	1.463	2,542
Animi & Copal	E 440	0.100	Nitrate Soda ,,	7,857	2,258
pkgs	7,448	8,122	Sarsaparillabls	629	437
Arabic, all de-	01.050	0.050	Senna bls, &c.	530	1,983
scriptions pkgs	21,258	6,656	Shellac chts	64,100	49,742
Asafœtida "	1,021	1,035	Turmeric tons	1,549	602
Benjamin "	1,773	1,440	Vermilion, chts &c.	99	0.

CULTIVATION OF CINCHONA IN EUROPE.

In a recent issue the Athenaum quotes from M. Vogel (Biedermann's Central Blatt) that it is a "very remarkable fact in relation to the chemical action of the solar rays, that cinchona trees growing in hothouses in Europe develope no quinine in their bark." This is contrary to the experience of the late Mr. J. E. Howard, who took a warm interest in the propagation of cinchona, in his own hothouses. On one of these he wrote as follows in a paper contributed to the British Pharmaceutical Conference, 1880:

"I found that canker had invaded the plant to a serious extent; and, after trying in vain some heroic remedies, I determined to root up the calisaya, and if possible gain some useful information as to the cause of its death. The age of this tree was eight years, the height between 7 and 8 feet, but would have been much more had I not been compelled to cut off the top some years before in accordance with the requirements of my conservatory. Before doing this I succeeded in taking a strip along this upper portion and renewing the bark under moss, as practised in India. The girth of the stem at the base was $9\frac{3}{4}$ inches, and about $6\frac{1}{4}$ inches at the summit (where cut off). The result of the analysis of the bark of my tree was as follows: - Calisaya Angelica quill: 1.25 sulphate of quininc, 0.70 cinchonine, 0.15 quinidine. Calisaya Angelica stem bark: 3.20 sulphate of quinine, 1.50 cinchonine, 0.32 quinidine. Calisaya Angelica root bark: 3.95 sulphate of quinine, 1.00 cinchonidine, 4.00 cinchonine, 0.27 quinidine. This must be considered satisfactory for a tree grown under glass in England."

This is a direct contradiction to Mr. Vogel's statement. We take it that what is meant is that the solar rays have the effect of decreasing the percentage of alkaloids, and not only so, but have the power of causing degeneration of the quinine. This is not a new fact. It was first observed by Mr. MacIvor, and no further back than last year Mr. David Hooper, Government quinologist of Madras, referred to the point in his paper communicated to the Aberdeen conference.

THE MARSEILLES MARKETS.

MESSRS. O. GROSS & CO. write us as follows concerning the Marseilles market, under date of May 3:—

COCHINEAL.—Only about 250 bags are left on our market in first hand. Although the feeling remains firm, prices have recently declined. Good greys in single bagging offering now at 3.40f. to 3.50f. per kilo. f.o.b. (= 1s. $2\frac{s}{10}d$. to 1s. $3\frac{t}{4}d$. per lb. f.o.b.); silvers at 3.60f. to 3.55f. (= 1s. $3\frac{3}{20}d$. to 1s. $3\frac{s}{10}d$. per lb. f.o.b.); super grey blacks, of which there are only 25 bags left, at 4.37f. (= 1s. 7d. per lb. f.o.b.). Lower qualities may be had at prices corresponding to 1s. $3\frac{t}{4}d$. to 1s. $6\frac{11}{20}d$. per lb. f.o.b.

GALLS.—Demand extremely limited. Prices have slightly declined, holders offering blue and green Syrian, superior, at 152 50f. to 142 50f. per 100 kilos. f.o.b. (= 62s. 1d. to 58s. 1d. per ewt. f.o.b.), and commercial at 137.50f. to 127.50f. per 100 kilos. f.o.b., as to quality (= 56s. to 52s. per

cwt. f.o.b.).

GUM ARABIC.—There is very little doing in this article owing to paucity of stock. For the small balance of good soft sorts which is left on our market 520f. per 100 kilos. (101. 11s. 8d. per cwt. f.o.b.) is asked, while medium soft to hard sorts are held at from 495f. to 485f. per 100 kilos. (10l. 1s. 6d. to 9l. 17s. 6d. f.o.b.). Ghezira and Halabi gums are wanting. Of Senegal, Galam is scarce at 317 50f. per 100 kilos. (129s. 2d. per cwt. f.o.b.), whilst Bas du fleure might be had now at 310f. per 100 kilos. f.o.b. (126s. 2d. per cwt. f.o.b.).

SAFFRON.—Buyers continue to withhold, whilst sellers maintain their previous high pretensions, asking for selected Valencia 126 50f. per kilo. fo.b. (= 46s. per lb. f.o.b.); for superior Valencia, 123.50f. per kilo. f.o.b. (= 44s. 11d. per. lb. f.o.b.); and for good pure Valencia, 120f. per kilo. f.o.b. (= 43s. 8d. per lb. f.o.b.). Stock at Valencia, 10,000 kilos. new erop and 2,600 kilos. old erop saffron. In Alicante, adulterated saffron is also but little doing, extra superior quoting 76f. per kilo. f.o.b. (= 27s. 7d. per lb. f.o.b.); and superior 66f. per kilo. f.o.b. (= 24s. per lb. f.o.b.). All above quotations to be understood for cases of 4 tins, each tin containing 25 lb. nett.

ANISEED has slightly declined, clean Alicante, superior, quoting now 125f. per 100 kilos. f.o.b. (=50s. 11d. per ewt. f.o.b.); clean Spanish, commercial, 112.50f. per 100 kilos. f.o.b. (=45s. 10d. per cwt. f.o.b.); and clean Levant, from 90f. to 60f. per 100 kilos. f.o.b. (=36s. 8d. to 24s. 6d. per cwt. f.o.b.), as to quality.

CELERY SEED.—Best French is offering now at 60f. per 100 kilos. fo.b. (=24s. 6d. per cwt. f.o.b.), without finding purchasers.

CUMIN SEED.—Stock limited: holders of elean Malta asking 120f. per 100 kilos. f.o.b. (=48s. 10d. per ewt. f.o.b.) and elean Levant is being kept at 85f. per 100 kilos. f.o.b. (=34s 8d. per cwt. f.o.b.). Clean Spanish is wanting.

GENTIAN ROOTS, best Savoy, are neglected, and might very likely be obtained now at 37f. per 100 kilos. f.o.b. $(=15s.\ 1d.\ per\ cwt.\ f.o.b.)$.

HELLEBORE ROOTS, unshaved, remain quiet, and declined to 53f. per 100 kilos. f.o.b. (=21s. 7d. per cwt. f.o.b.), at which figure about 3,000 kilos. are left in store here.

LICORICE ROOTS.—Several lots of green roots have lately arrived, but they are still too fresh to suit for export for the moment. Later on we hope to be able to supply select licorice roots, in small wired bundles, sticks all full length, packed in eases, at about 85f. per 100 kilos. f.o.b. (= 34s. 7d. per cwt. f.o.b.). Tortosa roots, sorts, in bundles are quoted nominally 50f. per 100 kilos. f.o.b. (= 20s. 4d. per cwt.).

VERDIGRIS.—We hear that only one small lot of 5 casks true extra dry Narhonne "au mare de raisins" is now left in the interior, for which holders ask 207f. per 100 kilos. f.o.b. (= 84s. 4d. per ewt. f.o.b.). No fresh supplies of this grade of verdigris are expected to be available before next fall. Extra dry Narhonne, good quality (made with acetic acid), can be obtained at from 158f. to 168f. per 100 kilos. f.o.b., as to brand and quality (= 64s. 1d. to 68s. 1d. per cwt. f.o.b.), and good merchantable verdigris, dry balls, has lately been proposed at the low figure of 97.50f. per 100 kilos. f.o.b. (= 39s. 9d. per cwt. f.o.b.).

THE AMERICAN MARKETS.

NEW YORK, April 26.

THE total absence of any transactions of importance imparts to the drug market an appearance of dulness, which is more apparent than real, for of course a large consumptive demand is going on, although it is admitted that only a from-hand-to-mouth policy of buying is pursued. The export demand continues rather slack. The prices sterling (in parentheses) are what the different articles would cost delivered in London, all market allowances, discounts, &c., being taken into account. Importers can, therefore, see at a glance the course of this market compared with their own.

MEXICAN SARSAPARILLA.—The stock may now be said to be only 64 bales, for the sailer with 200 bales on the way is reported a total wreck on the Florida coast.

'Coca Leaves.—The holder of the Huanuco quality has considerably modified his views, and now quotes 35c. (1s. $6\frac{1}{2}d$.), but it is thought that less would be accepted. Any way, the market now shows a decided downward tendency, and may reach the 25c. (1s. $1\frac{1}{2}d$.) after all. One large cocaine factory would clear the market at that price, or a little over, it is said.

COD-LIVER OIL.—There are no buyers of Newfoundland, and the oil goes almost begging; prime straw-coloured, free from stearine, has been sold as low as 40e. (2s. $1\frac{1}{2}d$. imperial gallon).

GUARANA.—From second hands the price is \$1.15 (5s.) in bond. The stock here now is not large. It is not known if any more will arrive.

BROMIDE l'OTASSIUM.—Owing to the disputes between the manufacturers the cutting continues, and now 33c. $(1s. 5\frac{1}{4}d. 5)$ per cent.) is quoted by one or two makers. The bromine combination remains in force.

JALAP ROOT.—The stock here at present, in first hands, amounts to 210 bales, most of it fine heavy quality; although only lately arrived, it appears to be mostly old root, and, indeed, reports from Mexico speak of it as being stock which was held back there, hoping the market abroad would improve. Whether it has now been hurried forward because the new digging is large in yield, or because the owners got tired of holding it, remains to be seen. That it will not be sacrificed is shown by its being firmly held at from 10c. to 11c. $(5\frac{1}{4}d$. to 6d.), according to quality.

QUININE.—No alteration to report. German is officially quoted 64e. (2s. $8\frac{5}{5}d$. 5 per cent.), in 100-oz. tins, but second hands offer at 62e. (2s. $7\frac{5}{3}d$.).

ESSENTIAL OILS.—Wintergreen, contrary to expectation, but chiefly owing to the complete absence of demand, has fallen to \$1.80 to \$1.90 (7s. 9d. to 8s. 2d.), according to package. Sussafras never before was so cheap as it has ruled for the last few months. Sales were made as low as 34e. as received from the distillery, but 38e. (1s. 8d.) in export packages would still purchase. It will be dearer before the summer is over, for operations have now come to an end, and no more will be distilled till late in the autumn. Spearmint is very searce and dear, \$7 (29s. 3d.).

OIL PEPPERMINT is very dull and depressed; there is no demand, and holders have now eeased to offer, for it appears that sales are not a matter of price. Those interested are resting on their oars for the present. Pure Wayne County in tins is nominally \$4 (16s. 8d. net).

SERPENTARIA ROOT.—It is now reported from Texas that it will be very searce this year; this, however, may be a statement circulated by the parties who are trying to control the market.

CABLEGRAM.

May 6.

Since my letter large arrivals of guarana have taken place, but the demand is very slack, and it may be expected that prices will decline.

There has been more movement in oil of peppermint, and speculators have taken up the article and are operating for a rise.

Prices Current.

The prices quoted in the following list are those actually obtained in Mincing Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms,

CHEMICALS.		I s.	ast Month		This Month
Acetic	per lb.	0	21 to 0	0	0 2½to 0 0
pureglacial	**	0	5 0	9	0 5 0 9
Benzoic Sublimate .	"	3	6 0	ŏ	3 6 0 0
Ex Gum	per oz.	0	6 · · · 0 11½ · · · 2	0 4	0 6 0 0 2 2 2 4
Gallic	"	3	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0	3 1 0 0
Hydrochloric	per cwt.	4	6 7	6	4676
Nitric	per lb.	0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Sulphuric	"	0	0^3_40	0	0 03 0 0
Salicylic Tannic	**	6	9 0	6	6 9 0 0
Tartarie, English	"	1	$9\frac{1}{2}1$	10	1 9 1 9
foreigu ANTIMONY, crude	per cwt.	16	0 0 5 17	5	1 8½ 0 0 16 5 17 0
star	,,	33	0 35	0	34 0 35 0
Arsenic, lump	**	21	0 22 9 0	0	21 0 22 0 9 0 9 3
Brimstone, rough	"	8	0 8	6	8 0 8 6
roll flowers	**	10	0 8	6	8 0 8 6
GLYCERINE, German ref.	»,	38	6 42	ő	38 6 42 0
crude brown IODOFORM	per'lb.	16	0 0 4 0	0	0 0 0 0
IODINE, dry	per oz.	0	9 0	0	0 9 0 0
resublimed	,, now 1b	1	$0 0 \\ 3 1$	11½ 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Magnesia, calcined Hwds	per 1b.	5	0 0	0	5 0 0 0
MERCURY	per bot.	120 2	00	0	123 0125 0
PRECIPITATE, red white	per lb.	2	9 0	0	2 9 0 0
PRUSSIAN BLUE	"	1	8 2	0	1 8 2 0
SALICINE	"	8 5	0 8 6 0	6 0	8 0 8 6 5 6 0 0
THYMOL	19	21	0 0	0	21 0 0 0
URETHANE	per oz.	0	0 0	0	0 0 1 7½
Alum	per ton	110	0 0	0	110 0 0 0
powder Ammouia:	>>	120	0122	6	122 6 0 0
Carbonate	per lb.	0	5 0	0	0500
Muriate, crude, white	per ton	540	0640	0	540 0640 0
Sulphate	,,,	255	0257	6	207 6212 6
Argol, CapeRed	per cwt.	96	0107 0 95	0	96 0107 0 87 0 95 0
Oporto, red	,,	0	00	Ō	0 0 0 0
Bleaching powder Borax, British refined	**	29	$0 \dots 7 \\ 0 \dots 30$	3 0	7 0 7 3
Calomel	per 1b.	2	6 0	0	2 6 0 0
Chloral hydrate Liebreich's	"	5	5 4	7	4 5 4 7 5 6 6 0
Cocaine	per grm.	5	7 1	8	1 4 2 0
Codcine	per oz.	25	0 27	0	26 0 27 0
Sûlphate	per cwt.	15	0 0	0	15 0 15 3
Copperas, green Corrosive Sublimate	per ton per lb.	45	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0	45 0 55 0
Cream Tartar, French	per cwt.	125	0 0	0	125 6 0 0
Epsom Salts	"	109	0 0	0	109 0 0 0
Glauber Salts	99 99	3	6 4	6	3 6 4 6
Magnesia: Carbonate Pond, Hwds	**	39 72	0 40	0	39 0 40 0 72 0 0 0
Morphiæ Murias	99 99	4	3 4	9	4 3 4 9
Phosphorus Potash: Bichromate	per lb.	2 0	$3 2$ $3\frac{1}{2} 0$	4	2 3 2 4 0 3 3 2 0 0
Carbonate:	"	_	02 0	U	
Potashes, Can., 1st Pearlashes, do.	per cwt.	29	0 0	0 6	29 9 0 0
Chlorate	per'lb.	0	61 0	0	0 61 0 0
Prussiate	"	0	$7\frac{3}{4}0$	0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Sulphate	per cwt.	10	6 0	ŏ	10 6 0 0
Potassium : Bromide	per lb.	1	7 0	0	1600
Chloride	per cwt.	9	0 0	ő	9 0 0 0
Iodide	per 1b.	11	0 11	6	11 0 0 0
Sulphate, Brit., in bot.	per oz.	3	2 0	0	3 0 0 0 2 11 0 0
Sulphate, French	* **	3 2	00	9	2 11 0 0 2 71 2 8
Sulphate, German, bulk Sal Acetos	per'lb.	0	8 2 6 0	6 1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Sal Ammoniac, British Saltpetre:	per cwt.	34	0 36	0	34 0 36 0
Beingal, 5½ p.c. or under	,,	16	6 16	$7\frac{1}{2}$	16 6 16 7½
Bengal, over 6 per ent. British, refined	"	21	0 0	0	0 0 to 0 0
Soda: Bicarbonate	"	7	$7\frac{1}{2}$ 0	ő	7 71. 0 0

	1	L	ast Month	This Month
Soda :—(<i>cont.</i>) Hwds	per cwt.	45	d. s. d. 0 to 0 0	s. d. s. d. 45 0 to 0 0
Carbonate : Soda Ash	per deg.	0	1. 0 0	0 15 0 0
Soda Crystals	per cwt.	2 8	26. 286	
Caustic Hyposulphite	"	7	9 8 6	7 9 8 6
Nitrate Zinc Sulphate	"	11 8	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	8 6 8 9
SUGAR OF LEAD, White Brown	,,	0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	22 6 0 0
Verdigris	per cwt.	0 2	000	42 0 87 0 2 0 0 0
Vermilion, English	per lb.	2	$\begin{array}{ccccc} 0 & \dots & 0 & 0 \\ 0 & \dots & 2 & 1 \end{array}$	2 0 0 0
DRUGS. ALOES, Hepatio	per cwt,	60	0145 0	60 0145 0
Socotrine Cape, good to fine	- "	80 30	0185 0 0 32 6	80 0185 0 30 0 33 0
infr.to fair	"	20 70	0 29 0	20 0 29 0 70 0120 0
Barbados Curaçoa	,,	40	0120 0	40 0120 0
AMBERGRISBALSAM—	per oz.	40	0120 0	
Cauada Capivi	per 1b.	1 1	517	1 5 1 7
Peru	"	5	4 5 6 4½ 1 6	5 4 5 6
BARKS—	"			0 0 42 0
Canella alba Cascarilla	per cwt.	24	0 42 0 0 27 0	24 0 27 0
South American—	per lb.	1	3 2 3	1 3 2 3
Calisaya, flit , quill Columbian, good to fine	"	1	10 2 4	1 0 3 6
,, ord. to fair	"	0	6 1 0	0 6 1 0
Crown, Loxa Grey (Huanuco)	"	0	4 1 5	0 4 1 5
Maracaibo	"	0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0 3 0 10
Red, flat	"	2	$0 \dots 10 \ 0 \ 0 \dots 3 \ 6$	2 0 13 0 1 0 3 6
Cuprea East India and Ceylon,	"	0	64 2 0	0 7½ 2 0
crown	,,	0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Do., red	"	0	$2\frac{1}{2}$ 0 10	0 2½ 0 10 65 0 67 6
CAMPHOR, China Japan	per cwt.	65	000	63 U 79 U
Refin. Eng Tablets	per lb.	0	$0 \dots 0 0 0 11\frac{1}{2} \dots 1 5$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
CAMOMILE FLOWERS CANTHARIDES, China	per cwt.	50 5	000	0 0 0 0 4 6 4 9
,, Russian	,,	8 25	6 9 0	8 6 9 0 25 0 38 0
CASTOREUM	"	0	0^3_403	0 2½ 0 3
Coca Leaves Dragon's Blood	per cwt.	80 80	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	80 0240 0
FRUITS & SEEDS (see	per lb.	1	0 1 4	1 0 1 4
also Seeds and Spices) Auise, China Star	per cwt.	85	0 90 0	85 0 87 6
Russian	per lb.	28	0 30 0	28 0 33 0
Beans, Tonquin Cardamoms, Malabar,	per in.			
goodinferior	»	2 1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 6 2 6
Aleppy Madras	"	0	1 1 8 8 1 9	$\begin{bmatrix} 1 & 1 & \dots & 2 & 6 \\ 0 & 8 & \dots & 1 & 9 \\ 0 & 8 & \dots & 1 & 2 \\ 1 & 2 & \dots & 3 & 4 \end{bmatrix}$
Ceylon, long Malabar sorts	**	0	8 1 2 2 2 11	$\begin{bmatrix} 0 & 8 \dots & 1 & 2 \\ 1 & 2 \dots & 3 & 4 \end{bmatrix}$
Cocculus Indicus	per cwt.	9	0 10 6	9 0 10 0
Cubebs	per lb. per cwt.	300	0330 0	300 0330 0
Cummin Fenugreek	"	27	0 42 0	6070
Juniper Berries Nux Vomica	"	9	0 0 0 6 11 6	9 6 . 11 6
Tamarinds, E. India W. India	"	10	0 12 0 0 16 0	9 0 11 0
Vanilla, large	per'lb.	15 8	0 23 0	13 0 24 0 7 0 12 0
inferior FLOWERS—Dalmatian	"	60	0 90 0	60 0 90 0 95 0 0 0
Honey, California	per cwt.	95 16	000 025	19 0 30 0,
Jamaica IPECACUANHA	per lb.	25	0 31 0 4 4 3 1 4 3 7 4 7	3 4 4 3
Isinglass, Brazil Tongue sort	**	3 2 1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 11 4 1 1 6 3 9
East India West India	», »,	0 2 8	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Russ, leaf	93 29	8	0 11 0	8 0 11 0
JALAP, good	"	0	$6\frac{1}{2}$ $0.7\frac{1}{2}$	0 6½ 0 7½ 0 5½ 0 6
infer. and stems LEMON JUICE, f.o.b.	"	0	$5\frac{1}{2}$ 0 6	250 0 0 0
Messina Lime Juice, Jamaica	per pipe per gall.	660	0670 0 3 0 0	1 3 0 0
Liquorice, Spanish Liquorice Root	per cwt.	55 12	0100 0 0 20 0	55 0100 0 12 0 20 0
MANNA, flaky	per lb. per oz.	7 65	6 8 6 0 68 0	7 6 8 6 65 0 77 0
Musk, Tonquin pod Grain	per 02.	35 32	0 90 0	35 0 90 6 25 0 38 6
Yunan pod OILS (see also separate list)	,,	1		1 7 0 0
Almond, expressed Castor, 1st pale	per lb.	0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0 3g C

)	Last Month	This Month	011 4 11	- 1	Last Month	This Month
Oils:—(cont.) Castor, second	per 1b.	s. d. s. d. 0 31to 0 31	s. d. s. d. 0 3 to 0 3 i	Oils:—(cont.) SEAL, yellow to tinged	per tun	£ s. £ s. 23 0 to 24 0	£ s. £ s. 23 0 to 24 0
Cod-liver	per gall.	2 0 5 0	3 6 5 0	brown	19	18 0 22 0	18 0 22 0 55 0 56 0
Essential Oils: Almond	per lb.	25 0 0 0	25 0 0 0	Sperm))))	28 0 0 0	25 0 26 0
Anise-seed, star	,,	6 3 6 4 8 0 13 0	6 3 6 4 8 0 13 0	WHALE, South Sea, pale	>>	20 0 21 0 17 0 18 0	20 0 21 0 17 0 18 0
, German, &c. Bergamot	"	10 6 11 3	10 6 11 3	yellow brown	†† ††	14 0 16 0	14 0 16 0
Cajeput	per bot.	3 3 3 4 5 3 5 6	3 3 3 4 5 3 5 6	Sardine	per ton	25 0 27 0	25 0 27 0 0 0 0 0
Caraway Cassia	per lb.	3 3 3 4	3 0 3 3	OLIVE, Seville	per ton	0 0 0 0	0 0 0 0
Cinnamon	per oz.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Levant Mogador	39	0 0 0 0 33 0 33 10	0 0 0 0 32 15 33 0
Cinnamon-leaf Citronelle	"	$0 \ 1_{\frac{1}{16}}$ $0 \ 1_{\frac{1}{8}}$	0 15 0 0	Spanish	"	40 0 0 0	39 0 40 0
Clove	per lb.	4 0 4 3	4 3 0 0 1 6 1 9	Sicily COCOANUT, Cochin	"	0 0 0 0 29 0 29 5	0 0 0 0 28 10 29 0
Juniper Lavender, Exotic	"	6 6 . 7 6	6 6 7 6	Ceylon	"	25 0 25 15	24 15 0 0
" Mitcham Lemon	"	40 0 50 0 4 0 11 0	40 0 50 0 4 0 11 0	Manritius PALM, Lagos	19	26 0 0 0 20 5 23 0	25 5 0 0 20 5 23 0
Lemongrass	per oz.	0 13 0 13	0 13 0 15	LINSEED	"	20 5 20 10	19 5 19 10
Neroli Nutmeg	"	7 0 0 0	7 0 0 0 0 5 0 6	RAPESEED, English, pale brown	"	22 5 0 0 20 15 0 0	21 5 21 10 19 15 20 0
Orange	per'lb.	8 0 10 0	8 0 10 0	Cottonseer, refined	"	17 9 17 5	16 10 17 10
Otto of Roses Patchouli	per oz.	13 0 22 0	13 0 22 0	LARD TALLOW	"	34 0 35 0 21 6 31 0	33 10 34 10 25 0 45 0
Peppermint: American	per lb.	12 0 12 6	12 0 12 6			s. d. s. d. 28 9 29 0	s. d. s. d. 26 0 0 0
(H. G. Hotchkiss) English	"	18 0 18 6 30 0 32 0	30 0 32 0	TURPENTINE, American PETROLEUM, refined	per cwt. per gall.	0 513 0 6	0 57 0 6
" (Jakson)	11	39 0 45 0	39 0 45 0 10 0 12 0	Spirit	,,	$0 \ 7 \dots 0 \ 7\frac{1}{2}$	0 7 0 7 ½
Japan Menthol crystals	"	10 3 15 0	10 3 15 0	SEEDS. CANARY	per qr.	44 6 70 0	44 0 62 0
Rosmary	11	3 0 3 9	3 0 3 9 0	CARAWAY, Mogadore German. &c.	per cwt.	31 0 0 0 36 0 47 0	31 0 0 0 36 0 47 0
Sassafras Spearmint	"	12 0 14 0	12 0 14 0	CORIANDER	"	14 0 19 0	14 0 19 0
Thyme	per oz.	1 9 2 3 0 2 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	HEMP LINSEED, English	per qr.	38 0 0 0 42 6 0 0	38 0 0 0 42 6 0 0
OPIUM, Turkey	per oz.	8 6 15 0	8 0 14 6	Black Sea & Azof	"	0 0 0 0	0 0 0 0
" Egyptian QUASSIA (bitter wood)	per ton	6 0 9 0 80 0 95 0	6 0 8 0 80 0 95 0	Calcutta	,,	45 3 45 0 46 0 0 0	39 6 0 0 40 6 0 0
RHUBARB, China, good				St. Petersburg	11	35 0 38 0	0 0 0 0
and fine	per lb.	2 0 2 9	2 0 2 9 1 3 1 11	MUSTARD, brown white	per bush.	10 0 12 0 7 6 9 6	$\begin{bmatrix} 10 & 0 & \dots & 12 & 0 \\ 7 & 6 & \dots & 9 & 6 \end{bmatrix}$
ROOTS—Calnmba	per cwt.	35 0 60 0	35 0 60 0	Poppy, East India	per qr.	33 9 0 0	33 6 0 0
China	"	21 0 28 0 28 0 30 0	24 0 27 0 28 0 30 0	SPICES.			
Galangal	"	12 0 13 0	12 0 13 0	CASSIA LIGNEA	per cwt.	25 6 26 0	26 0 0 0
Gentian Orris	>9 99	18 0 0 0	16 6 18 0 0 0 0 0	Vera Buds	"	19 0 25 0 43 0 45 0	19 0 25 0 43 0 45 0
Pellitory	22	0 0 0 0	44 0 0 0	Cinnamon, Ceylon:			0 61 1 7
Pink Rhatany	per lb.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0 3 1 2	1st quality 2nd ditto	per lb.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Seneka	,,	1 4 2 2	1 4 2 2 3 3 3 5	3rd ditto	",	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Snake	"	50 0 52 0	43 6 43 0	Tellicherry	"	0 15 0 31	0 13 0 31
Alicante	**	27 0 31 6	24 0 23 0 0 5½ 0 6½	CLOVES, Penang	"	0 108 0 114	0 108 0 114
Sarsaparilla, Mexican Guayaquil	"	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	0 7 1 0	AmboynaZauzibar	"	0 71 0 75	$0 7\frac{1}{2} 0 7\frac{3}{4}$
Hondnras	"	1 5 1 8	1 5 0 0	GINGER, Jam., fine Ord. to good	per cwt.	71 0 220 0 0 41 70 0	8‡ 0 0 0 37 0 71 0
Sassafras	per ewt.	0 0 0 0	0 0 0 0	African	"	30 0 0 0	26 0 0 0
SCAMMONY, Virgin second and ordinary	per lb.	18 0 24 0 5 0 17 0	18 0 24 0 5 0 17 0	Bengal	"	17 0 0 0	16 0 0 0
SENNA, Bombay	"	0 11 0 3	0 11 0 3	Cochin))))	26 0 90 0	20 0 92 0
Tinnivelly	"	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Pepper, Black, Malabar Singapore	per lb.	0 78 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
SPERMACETI, refined	"	1 11 2 0	1 11 2 0	White	"	0 109 0 0	0 10 0 11
American	"	0 21 0 3	0 21 0 31	Mace, 1st quality	"	1 0 1 8	1 0 1 8
GUMS. Ammoniaci, drop		£ s. £ s.	£ s. £ s. 2 0 3 0	2nd and inferior	27	1 4 1 5 2 4 3 6	1 3 1 7
ANIMI, fine washed	per cwt.	14 10 16 0	14 10 16 0	NUTMEGS, 78 to 60 to 1b. 90 80 ,,	19	1 2 0 2	1 11 2 0
ARABIC, pale picked	"	11 0 14 0	11 0 14 0 4 0 5 5	132 95 ,,	,,,	1 6 1 10 0 2½ 0 2	1 6 1 10
sorts, mid. to fine	"	4 0 5 5 1 0 3 15 12 0 17 0	1 0 3 15 12 0 17 0	PIMENTA	"	0 24 0 2,	0 2 0 21
TURKEY, pick. gd. to fin. second & inferior	,,	9 0 11 15	9 0 11 15	VARIOUS PRODU	CTS.		
sorts	"	9 0 11 0	8 10 9 0 128 6133 0	Hondnras, black	per lb.	1 6 1 10	1 6 1 101
ASAFŒTIDA, cm. to fin.	19	0 0 0 0 2 15 3 15	2 15 3 15	,, silver Mexican, black	"	1 4 1 9	1 4 1 9
BENJAMIN, Siam, 1st & 2nd		14 0 36 0	14 0 24 0	" silver	'n	1 3 1 5	1 3 1 5
Sumatra, 3rd to 1st	"	2 10 15 0	2 10 15 0	Teneriffe, black	,,	1 2 1 2	$\frac{1}{2}$ 1 2 1 $4\frac{1}{2}$
COPAL, Manila		s. d. s. d. 15 0 75 0	s. d. s. d. 16 0 90 0	GALLS, Tky blue China & Corea	"	52 6 60 0	52 6 65 0
Angola, red	",	145 0152 6	145 0 152 6	INDIGO, Bengal	27	2 6 7 9	2 6 6 0
DAMAR, palc EUPHORBIUM	"	70 0 80 0 12 6 20 0	70 0 80 0 12 6 20 0	, Madras Knrpah	"	1 4 4 10	1 6 5 3
GALBANUM	per'lb.	0 3 1 5	0 3 1 5	" Oude	99	2 0 5 2	
GAMBOGE	per cwt	. 215 0260 0 0 9 1 10	170 0260 0 0 9 1 10	ROSIN, American	per cwt.	2 9 6 9	2 2 6 3 3 6 3 9
Kino	per cwt	. 1 20 0 43 6	20 0 48 6	SOAP, Castile	>>		
Kowrie, sorts	"	30 0 50 0 110 0200 0	30 0 50 0 110 0200 0	SOY, China	per gall per cwt	£0 0 £0 0	£0 0 £0 0
MASTIC, picked	per lb.	2 6 3 0	2 6 3 1 97 6150 0	Jamaica	"	6 5 7 0	5 15 6 15 5 5 7 0
ordinary to fair	per cwt	70 0 95 0	70 0 95 0	East India VEGETABLE, Japan	79	6 5 7 0 5 5 7 0 £2 13 £2 15) £2 14 £2 15
OLIBANUM, p. drop amber and yellow	,,	45 0 55 0 30 0 44 0	44 0 50 0	Paraffin, refined	per lb.	0 4 0 5 £3 10 £3 15	3 0 4 0 5 € £4 5£4 15
SANDARAC	"	60 0 80 0	60 0 80 0	WOOD, DYE, Bar	per ton	7 0 18 0	7 0 18 0
SHELLAC, Orange	,,	51 0 70 0	46 0 £6 0	Cam Fnstic, Cuba	"	16 0 30 0	16 0 30 0
THUS	"	15 0 25 0	15 0 25 0	Jamaica	"	4 0 6 0	4 0 5 0
TRAGACANTH, leaf	"	00 0240 0 240 0195 0		Logwood, Campeachy Jamaica	"	6 0 8 10 5 0 5 5	4 15 5 5
OILS. SEAL pale		£ s. £ s.	£ s. £ s.	LIMA	39	7 10 8 10	7 10 8 10
para para	l per tun	25 0 0 0	25 0 0 0	RED SANDERS	"	4 17/6 5 0	1 4 17/6 5 0



Memoranda for Correspondents.

Always send your proper name and address; we do not publish them unless you wish.

Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers please mark what you wish us to

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Pharmaeopæia Opium.

To The Chemist and Druggist-

SIR,—I entirely agree with what has been said by Mr. Moss and others in condemnation of the low morphine standard which has been fixed for the opium of the Pharmaeopæia. How the authorities decided to take 10 per cent. as the morphine strength of dried opium is one of those things which are not easily understood. It is certainly most unfortunate, and rather suggests that there ought to be some legal method of altering the Pharmacopæia without publishing a new edition. The 8 per cent, minimum of the 1867 Pharmacopæia was not so far wrong, especially considering that the average quality of the opium imported has since that time decidedly improved. The editors would have done well to have taken our best work on "Materia Medica" as their guide. At p. 57 of the "Pharmaeographia" of Flüekiger and Hanbury they would find: "From the foregoing statement we are warranted in assuming that good Smyrna opium deprived of water ought to afford 12 to 15 per cent. of morphine, and that if the percentage is less than 10 adulteration may be suspected."

I am not, however, at all prepared to accept the statement that opium of B. P. strength must necessarily be adulterated. A learned Scottish judge decided that an article could not be adulterated which merely contained an added quantity of one of its normal ingredients, and there is truth in his dictum. Every opium contains a certain amount of fibrous matter, and though a sample should contain so much as to reduce the percentage of morphine to 10 or 11 per cent., we cannot say that it is adulterated. There is no foreign matter added, the opium is not sold as of the finest quality, the purchaser gets what he wants; in short, there is no element of adulteration in the ease. Now, it is evident that so long as opium is weak in morphine only through containing an excess of fibrous matter or other insoluble substance, the morphine strength of the extract prepared from such an opium will be quite up to the mark. We may therefore easily obtain extract of full strength from opium of B. P. standard. Doubtless, if the opium be really adulterated with gum or other soluble matter, the extract will fall below the right strength. And let it always be borne in mind that the Pharmacopæia must be interpreted according to "the spirit," and not according to "the letter." There seems almost a superstition in some quarters regarding the Manifestly, opium of any strength may be used so long as it yields extract of the right quality.

I think all that has been said about the Pharmacopæia excluding Turkey opium is quite mistaken. The expression "opium of Asia Minor" is simply inserted as a definition of quality, especially to exclude the opium of India and Persia. "Turkey opium" means either opium from Turkey in Europe or from Turkey in Asia, and is undoubtedly what the l'harmacopæia intends to be used. Indeed, I am confident that if Mr. Moss could obtain opium of the right quality from poppies grown in his own garden, the authorities would be well pleased that he should prepare his extract and tineture I am, dear sir,

therefrom.

Abbey Hill Chemical Works, Edinburgh, May 1.

Very truly yours, D. B. Dott.

Cultivation of Plants.

To The Chemist and Druggist-

SIR,—Now that so much is being written on the subject of growing drugs in this country, it may prove of interest to those of your readers who are thinking of cultivating these new products to know what is being done by our American cousins. I have to-day received from Mr. J. W. Colcord, the energetic Secretary to the Massachusetts State Pharmaeeutical Association, a letter in which he says:—"I find my Mentha arvensis stood our unusually cold winter entirely unprotected, and is now coming up in all directions two or three inches high. I shall try and secure sufficient in June to distil enough to precipitate some of the camphor, and will report. Rhubarb, again, doing finely. Hope to be able to test the root this fall."

I may mention that Mr. Colcord is not the only one who bas started the cultivation of menthol, for in September, 1883, I heard from Mr. S. II. Lanbeck, in the State of Pennsylvania, that his plants were doing well. Mr. Todd, the manufacturer of pipmenthol, also laid it down on a large scale.

I think the cultivation of drugs should be encouraged by your valuable medium, as I am certain that such cultivators as do adopt the suggestion will receive the full support of

the trade when disposing of their crops.

I remain, sir, yours truly,

London, May 3.

THOS. CHRISTY.

What is wanted is for some one like Mr. Christy to tell us simply and definitely what to do and how to begin. A good many country ehemists have patches of land, quarter acre, half aere, and sometimes more. What is best worth trying? When should the planting be done, and where can the plants be obtained? If Mr. Christy will be good enough to put his information into the form of an article we should be glad to publish it, and many chemists, we think, would read it and follow his advice.]

The Shop Hours Regulation Bill.

To The Chemist and Druggist-

SIR,—If the early-closing Bill is allowed to become law without including the pharmaeists in its operations I think the majority of chemists would greatly regret it. Evidently tradesmen are quite as much in favour of compulsorily closing as the assistants, many of whom will be masters in the future. In the Holloway district the local association a few months ago obtained signatures from a very considerable majority of tradesmen and private residents in favour of an eight-o'eloek elosing, and I am sure there is no reason why most of a ehemist's takings should not flow into his till before that hour. I fully agree with Mr. J. Wilson as to the ultimate evil result of long hours, and I am not at all surprised to hear that he has not offended his enstomers by reducing his hours of business. Although long hours form no remedy for eempetition, yet the latter has frequently eaused the former, especially in suburban neighbourhoods. For instance, we will suppose Mr. Steel has an old-established business a little way out of London, when almost magically new roads and houses are constructed in the district. Mr Iron, who has a lucrative business elsewhere, thinks that it would be a good spec. to open a branch in the immediate vicinity of Mr. S., and being of opinion that as long as there are people about so long must the shop be open, of course instructs his manager to keep open until 10 or 11 o'clock, thereby hoping to eateh a few pence from the "prograstinators," and occasionally 1s. from some amorous young gentleman who, returning from a starlight stroll and attracted by the bright-looking colours in the window, becomes suddenly desirous of purchasing some perfume for his sweetheart. After a time Mr. Steel drops his old habit of shutting up about 8 or 8:30 and leaves his door open and the lights blazing until 10 or perhaps later, in order to prevent, if possible, any of his eustomers patronising the new-comer.

I am, sir, yours, &e., London, N., April 22. T. T. NICHOLSON. (144/55.)

SIR,—You appear to be more than usually near-sighted in your strenuous advocacy of the Shop Hours Bill as applied to our trade. Here, where a large number of the shops are kept by duly qualified members of the various grades of the medical profession, such shops will be allowed to remain open as heretofore, whilst their neighbours the chemists must close at the sound of the curfew. Is this fair or reasonable?

Glasgow, April 24. Vigilans. (145/32.)

[Our wakeful critic must be very keen-sighted indeed to have detected our "strenuous advocacy of the Bill." He does not explain how he comes to the conclusion that one class of shops will be affected differently to others.]

Superfluous Vowels.

To The Chemist and Druggist :--

SIR,—The "superfluous vowel" discussion reminds me of another superfluity which is very common on chemists' labels and circulars, viz., preventative. Preventive is the word. Speciality, too, and specialty appear to be used indifferently to signify a special preparation. Specialty is, I believe, the correct word. Speciality is an abstract noun: e.g. "He makes a speciality of putting up specialties."

Yours truly, JAS. WILLIAMSON. (147/26.)

Eastry, near Sandwich, May 3.

An Examiner Defended.

To The Chemist and Druggist -

SIR,—When I first read Mr. Byrne's letter in your issue of last Saturday, I could not help feeling a deep admiration for one who could even in the moment of victory remember those who had not been similarly successful. But reflection showed me that my admiration had been misplaced, and that on the contrary his remarks were deserving of the strongest condemnation; for has he not made a bitter attack on a gentleman who by his position is precluded from making any reply, basing this attack entirely on hearsay evidence? I passed the Minor examination very shortly after Mr. Byrne. I also presented myself in December last, when I was thrown in my last subject. On both occasions Mr. Tanner examined me in pharmacy, so I think your readers will admit that I am entitled to speak with some little authority concerning his method of examination. I may say that for weeks previous to the December examination I had been assured repeatedly by a small but noisy section of my acquaintances that to get Mr. Tanner was only a little better than meeting an angry bull in a narrow lane. To my amazement, however, I found this awful personage to be a pleasant and chatty gentleman, who after about twenty minutes' conversation sent me on to my next subject, at the same time expressing a hope for my success, a hope which, I regret to say, was not realised. The impression I received at our second meeting was even more favourable, and I was so struck with his fairness, his courtesy, and at the same time his thoroughness, that I feel constrained to protest against Mr. Byrne's letter.

It is, however, no use denying that there is among many pharmaceutical students a deep-rooted belief that Mr. Tanner is unnecessarily and unjustly severe. If you will allow me I will point out why, in my opinion, he has acquired this "unsavoury reputation," and I think I shall show that the fault lies with the aspirants to the title of "chemist and druggist," and not with the examiner. Mr. Tanner examines on the British Pharmacopæia. Too many candidates look upon the learning of this book as a disagreeable necessity, which is best postponed until six or eight weeks prior to their examination, and they then have only time to cram doses, specific gravities, ingredients, and strengths, a kind of knowledge which Mr. Gerrard in the preface to his "Materia Medica" speaks of with well-merited contempt. They do not seem to realise that, properly studied (not merely learnt), the B. P. may become as interesting and instructive as "Modern Ethies," or the "Critique of Pure Reason." Now it seems to me that Mr. Tanner requires that a man who presents himself for an examination in pharmacy shall have made the Pharmacopæia his study, that he shall have a thorough knowledge of the reasons of the various processes, and that he shall be able to draw inferences from these processes—in short, that he shall be what Dr. Thresh has called an educated,

rather than a merely instructed, man. Let me give an example of what I mean. I know some students who could accurately repeat the processes for the estimation of opium and extract of nux vomica, but who, if asked if morphine is soluble in other or strychnine sulphate in chloroform, would immediately reply in an aggrieved tone that these things are not in the B. P., and that such questions are consequently unfair. Were such candidates to be turned out by Mr. Tanner under these circumstances, they would doubtless find a numerous audience of sympathisers, while they eloquently dilated on the unfairness of being turned out on two things only, especially after going through the long estimation processes so well. But let me deal with the special case brought forward by Mr. Byrne, viz, the estimation of spirit of nitrous ether, and although I do not believe that any candidate was ever ploughed by any examiner because of his ignorance of one thing only, I certainly think that no one can lay claim to a "respectable knowledge" of the B. P. if he is unacquainted with this process. I presume that Mr. Byrne has been connected with pharmacy for at least five years. If during that time he has been a reader of THE CHEMIST AND DRUGGIST, he must long since have learnt that the most utterly useless test in the 1867 Pharmacopæia was that for the estimation of this very important article. That being so, one of his first thoughts on getting hold of a copy of the 1885 edition would be to look up this particular subject. Finding that he was referred to back numbers of the Pharmaceutical Journal, and not having these by him his next move would probably be to procure the new edition of a wellknown "Manual of Chemistry," which appeared at that time. Strange to say, he would there find but little information. He would then have had a distinct grievance against the editors of the B. P. and the author of the "Manual," and had he been one of those exceptional young men who pass their examinations without any assistance from teachers, I should on that account have excused his ignorance. But he has not this excuse, for I find his name in the pass list of one of the best schools of pharmacy in the country, and I feel confident that either Mr. Woodland or Mr. Burnett would willingly have explained the whole process, or rather processes, had they been asked. As Mr. Byrne and his friends are, however, ignorant in the matter, I can only conclude that they did not think the knowledge worth acquiring, thereby exhibiting not only a want of thoroughness in their work, but also a lamentable lack of interest in Pharmaceutical politics, a lack of interest which is not atoned for by the most profound study of Herbert Spencer or of Kant.

In conclusion, let me point out to Mr. Byrne that the result of his letter can only be to increase the nervousness of future candidates, thereby seriously diminishing their chances of success. I assure them that they have nothing to fear from any of the examiners, if they know their work and keep their heads clear. This opinion I have formed after a practical experience of Messrs. Gale (twice), Fletcher (twice), Tanner (twice), Barnes, Benger, Bowen, Corder, Linford, and Taylor. One of these gentlemen turned me out in December, but I am, notwithstanding this, able to cordially agree with Mr. Byrne that "all were most fair and judicial in their examination, and at the same time most courteous in their manners."

I am, yours very sincerely,

FELIX HOLT.

Dum Spiro Spero also writes us about Mr. Tanner, but as he has no definite statement to offer, we see no reason to print his letter. His evidence is to the effect that he was "floored" in pharmacy by an unknown examiner, whom he now supposes must have been Mr. Tanner, as he seems to think no one else would have been so unreasonable.

A Sheep-dip Question.

To The Chemist and Druggist-

SIR,—Will one of your readers give me his experience with regard to sheep-dips; whether an arsenical dip containing sublimed sulphur is improved by the addition of commercial carbolic acid, and also whether there is not a risk of chemical reactions taking place between the sulphur and acid, forming a dye? 1 find that none of the so-called non-poisonous or carbolic dips really answer; they kill all living parasites on

the sheep, but do not destroy the eggs, consequently in a short time the sheep are no better for dipping. If one of my country brethren can advise it would be esteemed a favour by

Yours faithfully,

May 3.

QUANDARY. (147-34)

Dispensing at Home.

To The Chemist and Druggist-

SIR,—What would you and your readers think of this experience? To-day a lady presented a prescription which was dispensed at my shop some four years since at the usual price—Is. 6d. for an 8-oz. mixture, 5j. doses. She first asked what a concentrated mixture would cost, and, being informed, she quietly produced a bill from a well-known Bristol surgeon, who had supplied the ingredients of the prescription separately and at wholesale price to the writer of the prescription—a fairly well-known Gloncester doctor, who had supplied the drugs, with full instructions how to proceed in mixing them, and had handed the bill of same to the patient. If that does not cap the store style of doing business, I am at a loss to see what will.

Gloucestershire, May 5. W. B. (147/51.)

The Pill Vase Question—Messrs. Newbery & Sons in form us that the signed of their correspondence with the solicitor to the Board of Inland Revenue on this subject has been that "fines have in some cases not been insisted upon, and in two cases known to them fines which had been paid have been returned. In one case, however, where pills had been advertised by handbills as well as by vase the Board declined to return the fine."

Curious Orders.

The following have been sent to us:-

"Ples giv the gril a bakrits puder for kepping the boles open for a woman edged 508 years."

"One penarth Whyokinshavins, one penarth Sasiferchips."

S. J. J. T. sends the following: -"Will you kindly state price of ladies' chest improvers, for thin busts?" -- "Consecrated Sarsaparilla." "Leabridge's Extract." (The latter written by a medical man.)

Swift's Syphilitic Specific.

In January, 1885, we quoted from an American source a formula for the above (known in America as S. S. S.), given by Dr. B. J. A. Cull, of Camilla, Ga. Dr. Cull now writes to us to point out a typographical error in the journal from which we quoted, in reference to the proportion of sulphate of copper, and in other respects he states he has altered the formula, which may now be given as follows:

The roots, &c., are boiled with 8 gallons of water, and covered with pine-tops, until the decoction acquires the colour of ink. Strain, add the sulphate and sufficient spirit to prevent fermentation. Dose, a wineglassful four times a day.

Subscriber (Leicester).—Candidates for the Minor examination must have been practically engaged for three years in the translation and dispensing of prescriptions. There must be an interval of at least three months between passing the Minor and appearing for the Major.

Irish.—Some of the wholesale houses occasionally get irstructions from their customers abroad to send them an assistant as well as other goods, but this is not very frequent. A steady qualified man going to Australia can generally get a situation soon after landing.

57/146. Miseible Tincture of Myrrh and Borax.— B. H. says glyceria, boracis and tinct myrrh, or tinct. myrrh, odorif., in proportions of from 1 to 5 to 1 to 7 (the latter preferably), will be perfectly miseible with water and form a bright tincture. He has sold it for years.

Legal Points.

56/146. Vax Vomica (Burhados).—We have now received your label. It is possible that if the preparation were to be sold in England it would be necessary to attach a patent medicine stamp to it; but this you could easily prevent by changing the wording of the label so as not to claim for it any medicinal properties. But then the Board of Inland Revenue would have you another way, for as a spirituous beverage or liqueur—which we suppose it to be—the preparation could only be sold by persons holding a spirit licence.

27 147. Inquirer.—You can register a trade-mark, which may be a word or a design, at the Trade Marks Office, Southampton Buildings, Chancery Lane. First you get the official form of application, which is to be sent in with 5s., and afterwards a fee of 1/. is to be paid if the trade-mark be accepted for registration.

33/146. Lev — You can register a title as a trade-mark if the Registrar will accept it. The fee on application is 5s, on registration 1/. Apply to the Registrar of Trade Marks, Patents Office, Southampton Buildings, W.C.

65/147. Subscriber and Pharmacentical Chemist sends us a cutting from the Allianer News of April 24 last, which gives a report of a movement in Cardiff having for its object the suppression of certain club; which the agitators declare to be bogus affairs and nothing but unlicensed drinking-shops. Our correspondent considers that associations and family combinations formed and registered in order to enable unqualified persons to deal in poisons and carry on the business and use the title of chemist are certainly nothing else than bogus, and believes that this easy, inexpensive, and simple way of evading the Pharmacy Act will prove every day more and more attractive to a certain class of scheming individuals. He described one such association which was registered last year, with a capital of 1,000% in 1,000 1% shares. Of these a husband and wife held 935, five of their brothers and sisters held 5 between them, and two private friends held 10 between them. Our correspondent says, "Bogus is certainly plainly marked in this case, and the wonder is that the Board of Trade permits it to be registered, and the Pharmaceutical Society takes no action, unless it be that they intend to extend them a little time in order that these bogus stores may increase and multiply and defeat the object of the legislature. The Pharmaceutical Society may continue on its apathetic course with the certain knowledge that its loss of influence is deservedly increasing, and its mode of action justifies the character it has for impotency, and utter want of sympathy with the general interests of the trade.

We certainly do not endorse these remarks. The Board of Trade could not prevent the registration of the company alluded to, and the Pharmaceutical Society fought the question as regards the right of companies to infringe the Pharmacy Act up to the House of Lords. They are not to be blamed for losing the case, though we do agree that, having lost it on an evident legal flaw in their Act, they ought to have carried on an earnest effort for its amendment, instead of dissipating their strength over curriculum and other

academic questions.

60/148 — Emigrant.—The English Minor certificate is accepted all through the Australasian Colonies as sufficient qualification for registration there. An assistant might expect to do rather better there than here, and has better chances. For other details we must ask our correspondent to look through the Australian correspondence published in this journal during the past few years.

The Widow's Clause.

X. Y. Z. asks if it is legal for a widow, being executrix, to carry on the business of a chemist and druggist by a duly qualified assistant, or if it is necessary to appoint trustees to enable her to do so. He is under the impression that a widow is compelled to dispose of the business within a given

[The widow of a chemist and druggist may carry on her deceased husband's business with a duly qualified assistant so long as she is executrix. The words of the Act (Sect. xvi.) are: "Upon the decease of any pharmaceutical chemist or chemist and druggist actually in business at the time of his death, it shall be lawful for any executor, administrator, or trustee of the estate of such pharmaceutical chemist or chemist and druggist to continue such business if and so long only as such business shall be bona fide conducted by a duly qualified assistant."]

Pharmacy Law.

To The Chemist and Druggist-

SIR,—Will you kindly allow me to draw attention to your legal replies to correspondents in your issues of April 24 and May 1? Thus, to 2/142, April 24, you think the words "Wholesale Druggist" do not infringe the Pharmacy Act. It will be well to correct this idea for the benefit of numerous readers of your journal, who are at present, or who may think of, using the words in connection with their business, as the Pharmaceutical Society have been, and are, collecting the 51. penalties and costs from unregistered persons for using the words "Wholesale Druggist" on their labels, &c., showing that they think the words do infringe the Act.

Again, to 30/144, May 1, I always thought that it was necessary for a limited company dealing in poisons and dispensing prescriptions to have a registered man for that particular work, and I believe they do have such men, but, according to your reply, that does not seem to be required. I have a faint recollection that the London and Provincial Association gained their case on the ground that they employed a registered chemist for their drug department. If the Pharmaceutical Society sued a limited company for selling, say, a pennyworth of laudanum, would it be a good defence for the company to produce their certificate of registration, and quote the Provincial case in Court? Again, to 40/259. This is quite new to me. May I ask if it was specifically decided that a limited company could style themselves "Chemists and Druggists," or do you only infer this to be the case from the general judgment of the Lords on the case mentioned? The result of this decision seems to be that a combination of seven persons, if they register themselves as a limited company, may defy the Pharmaceutical Society in every way. It would be of very great interest to many of your readers if you could reprint the Lords' decision in the Provincial case in your journal.

May 5. PHARMACY ACT. (52/148.)

[In all the answers critised by our correspondent we have carefully distinguished between what has been laid down on authority and what is merely our opinion. That limited companies may keep open shop for the sale of poisons without employing any registered assistant was distinctly laid down in the case referred to. It was not made clear that they could assume the title "Chemists and Druggists," though we think they could. Our correspondent surely might have taken the trouble to read up the case before he wrote the letter. His "faint recollections" are of even less value than our "opinions." The "wholesale druggist" question is, as we said, not an easy one; but we do not know that it has been scttled by a court.]

Labels.

Safety.—(1) Write to the Secretary of Inland Revenue, Somerset House, W.C., regarding the label. The authorities are desirous that chemists should consult them. (2) Eight ounces of sugar arc enough to afford 2 per cent. of proof spirit in a gallon of herb beer; but see p. 397, 145/14. (3) The Poisons Schedule you will find in The Chemist and Druggist DIARY.

149/1. Igo wishes to know if Unbleached Quinine may be used to make B.P. preparations. [Decidely not; "filiform silky snow-white crystals" are what the Pharmacopæia directs to be used.]

The Chemists and Druggists' Trading Association .-Two correspondents—one at York, another at Dingwall—who have written about this, are informed that the matter is having our attention.

The following correspondents ask us for information which we have given in these columns during the past few weeks:-149/3. X. Y. Z.—Erasmus Wilson's Hair Lotion.— March 6, p. 154.

149/6. Terebene.—March 27, p. 248. 148/67. A Student.—January, p. 62. Reply to A. E. T. Make Aqua Mentha Cone. in the same way. The deposit in Liquor Hydrargyri Perehloridi is HgCO3, due to the use of common water.

148/53. F. W.—We have nothing to add to what was said April 3, p. 280.

Nemo.—Cocaine Hydrochlorate solutions are best made with camphor-water, and the camphor-water in its turn should be made with spring-water.

146/43. W. H.—Composition of Sewer Gases.—Carbonic acid, sulphuretted hydrogen, ammonia, and its derivatives. But the composition will altogether depend upon what is in the sewer; for example, one of our correspondents some time ago mentioned that a seizure of methylated spirit had been turned into a sewer by the Customs authorities, so that we would have expected to find alcohol in the gases of that

Information Wanted.

148/35. Liebig's Infants' Food.—A working formula.

What is "Sword-wood"? (147/52.)

21/147. II. W. wants a "really good" recipe for Ginger Beer.

20/147. Creta wants to know where "powdered chalk" can be obtained in 5 or 10 ton lots. He believes it is "a by product of chalk," and probably obtained on the South Coast. If discoloured will not matter.

146/44. Oleum writes:—Can you or any of your correspondents tell me how to prevent ol. anisi from freezing? Any other method than keeping in a warm place? It is very troublesome to have to heat it every time it is required.

[Emigrate to Hindostan, or a warmer place if accessible. You cannot change the physical character of the oil without changing also its value as a medicine.]

167/30. J. Grant.—Hair Cream.—We have given several formulæ within the past few weeks. Use oleaceous butter colouring to impart a golden colour.

147/35. Vaseline.—Who are you? Read Memoranda for Correspondents at the head of this section. Also read the "Medicines We Dispense," published a fortnight since, and a good Latin grammar—Ince's, for example.

146/59. Student.—Send proportions and a sample of the deposit.

Polish for Stained Floors.—One oz. of yellow wax in shavings, dissolved in 5 oz. of turpentine by the heat of a water-bath.

Veterinary Treatment.

17/147. Wilts asks how he should treat a cow which bleeds slightly from the udder when milked, not always from the same quarter; no hardness, swelling, or apparent tenderness, and no sore teats. [Rub in ung. althere night and morning. Use a silver syphon to each teat a few minutes before milking, and give 1 oz. pot. nit. at intervals of two days for about five times.]

Veterinary Treatises.

61/146. Assistant wants to hear of a veterinary book for counter-prescribing. [There is no book intended for or suitable to the purpose; division and subdivision of subjects is now the rule, and you can only read up for your purpose by adopting the old works, such as Clater's "Farriery," White's or Youatt's. In The CHEMIST AND DRUGGIST of the last twelve months, and The CHEMISTS AND DRUGGISTS DIARY for 1833, articles appeared especially intended for counterprescribers. The recipes given in Beasley's "Druggists' Receipt Book" are for the mostpart good and reliable. The Useful Knowledge Society's "Book of the Horse" is the best on the subject ever written for any but professing veterinary surgeons.]

261/26. Novice.—Artificial Wax.—The sample sent does not contain paraffin, but appears to be made from Japan wax and mutton suct, and coloured with alkanet. Try a mixture of 3 parts of Japan wax and 1 of suct. For a paraffin wax use paraffin, 2 lbs.; resin, 4 oz., and lard, 6 oz. A yellow colour may be imparted with oleaceous butter-colouring and a red with alkanet.

147/68. Syrupus Hypophosphitum.— Aqua Larand. writes:—Could you kindly inform me the best way to prepare the following syrup? I cannot get the salts to dissolve. The form is as follows:—

Calcis hypophosph... .. 150 grs. Sodium ,, 150 ,, .. 130 ,, Ferri pyrophosphate ...
Mangan. hypophosph. 112 ,, 38 " . . 38 ,, Strychnine .. 11 ,, • • . . Syrup (to measure) ... 48 02.

[Make a thick syrup with the sugar required for 48 oz. of syrup. Dissolve the quinine and strychnine in 1 oz. of water to which a drachm of hypophorus acid has been added; also dissolve the remaining ingredients in 4 oz. of water with the aid of heat, while hot add to the syrup, and when mixed add the alkaloidal solution.]

147/66. Syrup of Lemon.—C. E. L. asks:—What are the proportions for making syr. limonis with tinct. limonis recenti and simple syrup?

[One oz. to the pint of syrup if the tincture is the same strength as tr. aurantii recentis.]

148/23. Canis.—Spiritus Ætheris Nitrosi.—The factor 0.336 used in calculating results is based on the following:—

$$\frac{15}{11160} \times \frac{75}{30} \times \frac{100}{1} = 0.336$$

 $\frac{15}{11160}$ is the weight in grammes of 1 e.c. of NO

75 is the molecular weight of $C_2H_3NO_2$, , , NO

 $\frac{100}{1}$ is required to raise to percentage.

Or it is the sum of

 $\frac{760}{273} \times 0$ 1207.

where 760 is the height of the barometric column in millinetres, 273 the constant for gases—that is, 273 volumes of any gas increase 1 volume for each degree Centigrade—and 0·1207 is the sum of

$$\frac{100 \times 273 \times 75 \times 0.08961}{760 \times 1000 \times 2}$$

Here 0 08961 is the weight in grammes of a litre of hydrogen; 1000 the c.c. in a litre, and 2 the factor necessary to bring down 75 (= $C_2H_5NO_2$) to unity. The other figures are explained.

Preparations v. Patents.

To The Chemist and Druggist-

SIR,-Most of your readers will agree with some portion or other of the opinions expressed by "One who believes there's life in the old trade yet," in your last issue. Slowly but surely chemists are waking up to the great necessity in these days of extreme competition, to place before the public prepara-tions of their own manufacture, the composition of which they can recommend with confidence against secret nostrums vaunted by advertisement. Not a few chemists, however, ask the question which your correspondent suggests, viz, "Will it pay for the printing?" My experience is that rarely would it be necessary to sell more than half-a-dozen bottles. or at the very outside one dozen, of any preparation before the entire cost of 500 labels would be paid for out of the profit; consequently the outlay in this item would be but trifling, and as for handbills, they can be obtained reasonably enough, as your advertising columns show. The contention of your correspondent that he not infrequently sells a preparation of his own through having labels ready printed in his possession is, no doubt, the experience of very many others. There are now some dozens of my friends who boast that they have not a single patent within their establishments, and yet they are doing good paving businesses by means of their own specialties, and, if asked for a patent, say they do not keep them; and, after a few questions to the customer, usually succeed in selling their own goods, with five or even ten times the amount of profit than could have been obtained upon patents which might have cost 9d. and be sold for $9\frac{1}{2}d$. By "putting up" a first-class article at a moderate price, the chemist is gaining public confidence for his own preparations, and establishing a reputation which no co-operative store can take away from him, and at the same time securing these customers for other miscellaneous articles of every-day consumption. True, everyone is not endowed with the same amount of eloquence or persuasive powers, and may not, like "One who believes there's life in the old trade yet," have sixty-one preparations wherewith to sell some 300% worth; but if each in his particular sphere, and according to the special class of trade, did his utmost to further his own interests and specialties, instead of pushing the preparations of others-which constitute the weapons of warfare whereby the chemists have been made the object of attack by the co-operative stores-a far more efficient state of things would exist in the next ten years than has been experienced in the past. Let those who are always complaining of the close proximity of the wolf to their doors bestir themselves, if they have not already done so, and try the effect of placing before their customers during the coming summer three or four preparations which are likely to meet their requirements at this season, and without doubt they will meet with just reward for their Yours, very truly, trouble. May 7. HENRY J. DALGLEISH.

148/54. Polish has had a visit from a man who wished to sell him for a paltry 6d. a miraeulous preparation which turned pennies into half-crowns by merely rubbing a little on the penny. Have any of our readers ever heard of such a wonderful stuff as this? We recollect that in our young days we did the same thing with a solution of nitrate of mercury, and our only unsatisfied wish was that we could not buy a half-crown's worth of anything with the transmuted coin. But science has progressed much since then.

The Pharmaceutical Preliminary examination does not

stand for the Medical Preliminary.

SUPPLEMENT

ZINC (HARRIS & CO.'S)

In 1-lb., 2-lb., 4-lb., 7-lb., 14-lb., and 28-lb. Boxes, 1/- lb. Special quotations to large buyers.

N.B.-EVERY PACKAGE HAS OUR SEAL UPON IT.

Great care is used in the preparation of our Oxide of Zinc, and it is superior to the ordinary Oxides sold as B.P., which frequently contain
Arsenic and Sulphate of Zinc in sufficient quantities to prove irritating to the skin.

CO. Manufacturing Wholesale and Export Chemists, BIRMINGHAM. PHILIP S

CB&C? P4 ARBER

CHANGED BY up for Retail Sale in 6d., 1s., 2s., 2s. 6d., and 5s. Bottles.

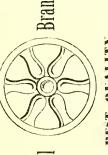
Also Barber's Concentrated Liquid COCHINEAL, for Colouring Jellies, Custards, &c. Put up in 6d. and 1s. Bottles,

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10 Jewin St., London, SOLE CONSIGNEE OF



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THERMOMETERS, LACTOMETER OF ALL DESCRIPTIONS. HYDROMETERS, &c., CHEMICAL GLASS APPARATUS ACME" AND "XLCR"

MEDICINAL CAPSULES, PERLES, "ACME" HARD AND SOFT

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Wholesale & Export Druggists & Manufacturing Pharmaceutical Chemists.

Manufacturers of Druggist's Sundries, and Dealers in P. t. nt Medicines and every requirement for Chemists and Druggists.

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Prices Current of Drugs and Chemica's and Druggists' Sundries (Illustrated) supplied on application enclosing business card.

ILLUSTRATED EXPORT LISTS (about 200 pages each), containing Prices of Drugs, Chemicals, Pharmaceutical Preparations, Druggists, Smudries, Surgical Instruments, Patent Medicines, &c, are sent post tree to any part of the World on application (ENGLISH, in January and July; SPANISH, in April and October). The above Lists offer unusual advantage as a medium for advertisments. Makers of Proprietary Medicines, Perfumers, &c., by advertising in same, will have their specialties brought prominently under the notice of dealers in all parts of the world. Terms for advertising (which are strictly moderate) may be obtained by applying to Messrs, EVANS, SONS & CO., 56 Hanover Street, Liverpool. All Advertisements translated into Spanish free of charge. ments translated into Spanish free of charge.

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DRUGGISTS. LANE, LONDON, E.C.,

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Messrs. B., S. & Co. request the attention of their friends and the Trade, at home and abroad, to their having PURCHASED THE BUSINESS of Messrs. JAMES BASS & SONS, Hatton Garden, and with it the various Formulæ from which their Special Preparations have been made, and pledge themselves to supply them in all their integrity.

Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.

Oval Pills of ENGLISH MANUFACTURE in the Market. Special List of REDUCED PRICES on application.

POWDERED DRUGS. All ground in our own Mills, and of Guaranteed Purity.

CONCENTRATED INFUSIONS AND DECOCTIONS. EFFERVESCENT PREPARATIONS. GELATINE COATED HORSE BALLS (PATENTED).

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WYLE CO.,

LONDON ADDRESS-1a BURY STREET, ST. MARY AXE, E.C.

INDEX TO ADVERTISEMENTS.

See pages v-vii.

Silver Medal at Inventions Exhibition 1885.



Established 1798



Howards & Sons

FLUID EXTRACT OF CINCHONA,

made from C. Califaya, or C. Succirubra, containing the whole alkaloidal contents of the bark.

QUININE, CINCHONA ALKALOIDS,

Acids, pure.

Æthers, pure & methylated.

Antimony preparations.

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Camphor Bells, Blocks, & Flowers.

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Spirit preparations.

AND OTHER PHARMACEUTICAL CHEMICALS.

Stratford, Essex.







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MEDALS-DUBLIN, 1882; BOSTON, 1883; GOLD LONDON (INTERNATIONAL EXHIBITION), 1884.

The ORIGINAL Article, as prepared by the Inventor, Sir James Murray, M.D.

For over 60 years in use as an excellent remedy in cases of

ACIDITY, INDIGESTION, HEARTBURN, GRAVEL, AND GOUT.

Sold by all respectable Chemists, in LARGE-SIZED Bottles (the 1s. size containing nearly Double the quantity usually sold at that price), at 1/, 2/6, and 3/6 each.

CAUTION.-Observe that the Signature of the Inventor is on every label.

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Is a valuable remedy in cases of Sleeplessness and Weak Nerves. Bottles, 1/ and 2/ each.

SIR JAMES MURRAY & SON, Chemical Works, Temple Street, Dublin, BARCLAY & SONS, 95 Farringdon Street, London.

DINNEFORD'S FLUID MAGNESIA.



The most efficacious antacid and mild aperient for Delicate Constitutions, Ladies, Children, and Infants.

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(WHITE AND GREY).

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" FOR THE BLOOD THE LIFE." IS

WORLD

(Registered Trade Mark-"BLOOD MIXTURE.")
The Celebrated CURE FOR Scrofula, Scurvy, Blood and Skin Diseases, and Sores of all kinds. Wholesale of all the Wholesale Houses. Net Wholesale Price, 23/- per doz. Usual terms.

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Prize Medals were Awarded to us at the Great International Exhibitional 1851, and 1862, for the General Excellence of our Goods. ESTABLISHED UPWARDS OF A CENTURY.

BUTLER, McCULLOCH & CO.,

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WHOLESALE IMPORTERS AND EXPORTERS OF ALL KINDS OF

MEDICINAL AND CULINARY HERBS, ROOTS, BARKS, SEEDS, AND PREPARATIONS. DISTILLERS OF PERFUMED & MEDICINAL WATERS.

All Powdered and Crushed Articles are prepared in London. Absolute Purity is thus assured.

The greatest care and judgment used in the selection and packing of irdents.

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Which can be opened for examination of contents and closed up again without detriment to the package.

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This Genuine Essence of Composition will be found superior, both in Medicinal Properties and Aromatic Flavour, to the Article generally sold.

Owing to the very great and increasing demand, we have been obliged to considerably enlarge our apparatus for its manufacture.

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Per lb., 1/3; Winchester quart, 1/1 lb.; per gal. (10 lbs.) 1/-lb.



BY APPOINTMENT

POTTER & CLARKE, Wholesale & Export Botanic Druggists, LONDON, S.E.

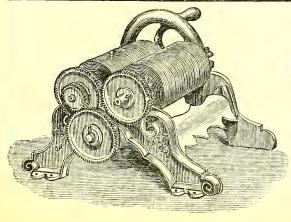
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HOP BITTERS GAUTION.

Our Preparation being duly Registered and Trade Marked under the Laws of Great Britain, and having been placed before the Public at great expense to us, we give notice that we shall fully protect our rights in every instance. Anyone making use of our Title, Labels, Bottles, or in any way attempting to trade on our reputation will be dealt with at once to the fullest extent of the law.

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DOUBLE-ACTION PILL MACHINE

Complete in itself, and requiring no Piping Press.

Reduced Price, £8 net.

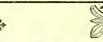
A week's trial allowed, carriage being paid. Write for Circular.

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AGENTS - ANY SUNDRY HOUSE. Small Pipers, 50/; Burnisher, 6/.



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DIPLOME D'HONNEUR ANTWERP EXHIBITION, 1883

The most Assimilable and Nutritious Extract of Meat yet offered to the public. Materially Cheaper and Superior to all similar Preparations,

Who will be glad to forward Samples, Pamphlets, &c., upon application.





FLUID BEEF EXTRAC

HIGHEST AWARDS

At International Exhibitions at BUENOS AYRES, 1882; AMSTERDAM and BERLIN, 1883; LONDON HEALTH EXHIBITION, 1884; NEW ORLEANS and ANTWERP, 1885.

This Extract embodies the latest discoveries and improvements, and is carefully made from pure Muscular Beef in South America, where the cheapness of cattle allows of unstinted use of only the best and freshest parts.

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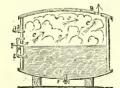
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SUCCESSFUL.

doz. mounted on a handsome Hustrated Show Card, Retail, 61. each; Wholesale, 3s 6d. per doz. It is especially adapted for Export Trace, and may be safely sent to the hotte, telimeter, as each glass tube is hearnetically selled and enclosed in a cardboard case, with full directions for use.

N.B.—The above is exempt from Stamp Duty by permission of the Board of the Board on the Board of the Bo

ROBINSON, Manufacturing Chemist and Distiller, PENDLETON. MANCHESTER.



REVOLVING A (Michaelis' Patent).

For further particulars See the Chemists' and Druggists' Diary, 1884, page 274, OR APPLY TO

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Qualities Genuine

Are made from the finest mustard seeds only. Their compounds, as manufactured for upwards of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medical purposes.

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CONCENTRATED PATENT

PEPTONISED MILK

AND

PEPTONISED MILK AND COCOA.

These two preparations are made with pure rich PRE-DIGESTED Country Milk, and, by mere dilution with hot water, afford a delicious restorative beverage the assimilation of which requires no digestive effort.

SAVORY & MOORE, LONDON.

Tins, 1s. 6d. and 2s. 6d.

Obtainable Everywhere.

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The Only GOLD MEDAL

For British Exhibitors was awarded to

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Low Quotations on application.

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Acknowledged to
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Eroc Alone as horignalysis of bolos. Analysis

TO THE CHEMISTS & DRUGGISTS OF THE UNITED KINGDOM.

St. George's Middle Street, Norwich.

The Excise have informed some of our customers that it is necessary to have a Wine License to sell our Liebig's Extract of Aleat and Mult Wine; we hold the opinion, in common with many of the large Wholesale Firms, that a Fatent Aledicine License is all that is required. If, however, any Chemist would like to hold a Retail Wine License, we are willing to pay the entire cost, if they will send an assorted order, to hand to their Wholesale House, for the following Wines, say:

3 doz. 2/9 Liebig's Extract of Meat and Malt Wine, at 24/6 per doz.

1½ ,, 4/6 ,, ,, ,, ,, at 38/-3 ,, Crown Imperial Invalid Port Wine ... at 28/-

3 ,, ,, at 28/- ,

This License will enable the holder to sell any kind of Wines. If it is preferred to make the order for all Liebig's Extract of Meat and Malt Wine, we have no objection to this, but a ready sale will be found for the Fort and Sherry, the quality of which is very fine. We have gone to a considerable expense in bringing the Liebig's Extract of Meat and Malt Wine before the public, and upwards of a Thousand Medical Men are now daily prescribing it.

Yours most obediently,





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LIVER REMEDY.

PREPARED

DANDELION

(LEA & PERRINS').

MADE WITH PURE

DANDELION ROOT & THE FINEST COFFEE.

Sold in Tins, at 8d., 1s. 6d., & 3s. each.

CARBOLINE (TOOTH PASTE)

1s. 6d. per Pot.

Best known Cleanser, Preserver, and Beautifier of the Teeth.

Supplied by the Patent Medicine Houses on the usual terms or the Makers.

GEORGE & WELCH, WORCESTER.

EIGHT PRIZE MEDALS AWARDED.

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YorkshireRelish

THE MOST DELICIOUS SAUCE IN THE WORLD.

This cheap and excellent Sauce makes the plainest viauds palatable, and the daintiest dishes more delicious. To Chops and Steaks. Fish, &c., it is incomparable. Sold by Grocers, Oilmen, Chemists, &c., in Bottles, 6d., 1s., and 2s., each.

CAUTION,—On each Yorkshire Relish Label is a Willow Pattern Plate, and name, Goodall, Backhouse & Co. No other is gennine.

Goodall's Baking Powder

THE BEST IN THE WORLD.

Makes delicious Puddings without Eggs, Pastry without Butter, and beautiful light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

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The best, cheapest, and most agreeable tonic yet introduced. The best remedy known for Indigestion, Loss of Appetite, General Dehility, &c. Restores delicate individuals to health and vigour. In Bottles, 1s. and 2s. each.

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For making delicious Custards without Eggs, in less time and at half the price. Unequalled for the purposes intended; will give the utmost satisfaction if the instructions given are implicitly followed. Sold in boxes, 2d., 6d., and 1s. each.

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Is acknowledged by all to be the most convenient and economical preparation ever introduced, as, by its use, a most Rich and Delioious Blancmange may be produced in a few minutes at a trifling cost, and may be had of various flavours, i.e., Raspberry, Strawberry; Lemon, Almond, and Varil'a. Sold in Packets, 6d. and 1s. each.

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Acknowledged to be the only real substitute for eggs yet discovered. Its action on Cakes, Puddings, &c., &c., resembles that of the egg in every particular, enriching them in colour and flavour, rendering them most wholesome and nutritious. One penny packet will go as far as four eggs; and one sixpenny tin as far as twenty. In 1d. Packets; 6d. and 1s. Tins.

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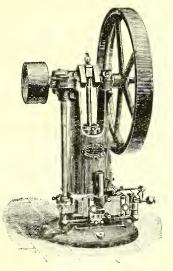
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18,000 IN USE.
65 PRIZE MEDALS.

Made in sizes 5-man to 100-H.P. VERTICAL, HORIZONTAL, AND TWIN CYLINDERED.



Crossley's New 5-Man Power "OTTO"

Engine, specially adapted for driving
small Aërated Water Plants, Colour
Mixing, Electric Lighting, &c., &e.

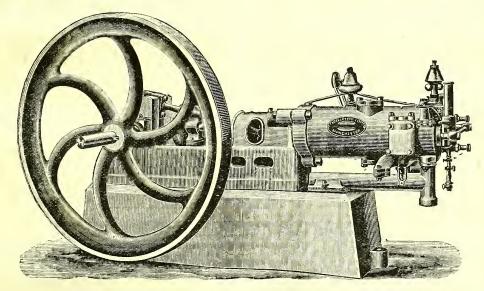
Can be supplied combined with small Dynamo for lighting up the Shop when not otherwise required.

"OTTO" GAS ENGINE.

18,000 IN USE.

65 PRIZE MEDALS.

Made in sizes 5-man to 100-H.P. VERTICAL, HORIZONTAL, AND TWIN CYLINDERED.



Consumption of Gas guaranteed to be 25 to 78 per cent. LESS than in any other Gas Engine per B. H. P.

ENGINES MAY BE PURCHASED ON THE DEFERRED PAYMENT SYSTEM.

Second-hand Engines (taken in exchange for larger sizes) generally in Stock.

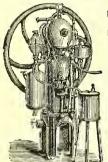
CROSSLEY BROS., LIM., MANCHESTER.

SUPPLEMENT

CAUTION --Circumstances which have come to the knowledge of Andreas Saxlehner, Buda Pest, Sole Proprietor of the Hunyadi Janos spring, compel him to warn the British Public against SPURIOUS IMITATIONS. To secure genuineness, purchasers should see that every bottle has on the LABEL the name of "THE APOLLINARIS COMPANY (LIMITED), London."



GOLD MEDAL



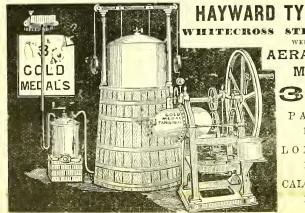
is guaranted to make extra sharp Soda Water, and the finest Lemonade, Ginger Beer, Ginger Ale, &c. requires no skilled lahour, and can he worked hy hand or steam power.

saves 50 per cent. of materials over any other hand machine, and requires less power.

will last for years without repairs beyond the renewal of washers. requires no gasometer, and occupies but a quarter of the room of an ordinary

is automatic in all its work, and merely requires the wheel to be turned. is of the finest workmanship, and is in use all over the world.

H. FAVARGER, 75° TURNMILL STREET, LONDON.

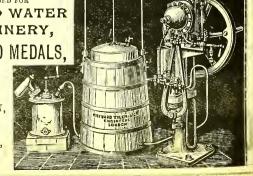


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PARIS, 1878.

LONDON, 1884.

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JEWSBUR' BROWN'S

FOR PURITY AND

SODA WATER.

SELTZER WATER.

POTASH WATER.

LITHIA WATER.

SIMPLE AERATED WATER.



LEMONADE.

GINGER ALE.

OUININE TONIC.

GINGER BEER.

HOREHOUND BEER.

EXTRACTS FROM ANALYTICAL REPORTS.

"The examination of the Waters which I have made has satisfied me that they have been precoared with the greatest care, and are of excellent quality."

"On the whole, I have no hesitation in stating that your Airated Waters are of the highest standard of purity which is practically attainable."

LOUIS SISBOLD, F.I.C., F.C.S.

"The Lemonade is, for flavour and general excellence, superior to any similar compound which I have examined, and contains no acid but Ctric Acid.
"I took a sample of the water used in your manufactory, in the preparation of the Aërated Waters, and found it, as was the case with the completed compounds, entirely free from lead, copper, or any injurious matter whatever."

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J. & B.'s Syphons are mounted with PURE BLOCK TIN, thus ensuring absolute immunity from dangerous metallic contamination

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THE ZOEDONE COMPANY'S ATERS

ARE UNSURPASSED FOR PURITY & EXCELLENCE.

'Pure, Invigorating, and possessed of valuable Dietetic Qualities." GRANVILLE H. SHARPE, Consulting Chemist, Analytical Laboratory, Great Tower Street, London, E.C.

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EUGENE GERAUT

SODA WATER MACHINES, FILLING MACHINES,

SYPHONS, SELTZOGENES, &c., &c., 139 & 141 FARRINGDON ROAD, LONDON, E.C., Late 1 and 2 CORPORATION BUILDINGS.

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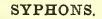
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ABOVE.

12 Charges 10 Charges

WHOLESALE PRICES as follows: __ 3-pint Size, Wire, 10/0; Cane, 10/6

3-pint Size, Wire, 10/0; Cane, 10/6
5-pint , , , 15/0; , , 15/9
8-pint , , , 25/0; , 26/6
Silver-plated Tops, 5/extra.
3-pint Size, strongly silverplated, richly decorated
Porcelain stands ... each 30/6
5-pint ditto , 35/0
3-pint ditto , 45/0
Cur well-known Seltzogenes are improved yearly, and have already stood a public test of upwards of Twenty Years, and are acknowledged as THE VERY BEST.



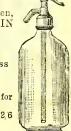
Clear or Coloured Glass (White, Blue, Green, or Yellow), pure ENGLISH BLOCK TIN TOPS, with Piston or Cap.

22/6

per dozen, for quantities of not less than one gross.

Packing in Cask, 5/ per gross. The Name marked on the metals free of charge for quantities of not less than one gross.

The Name engraved with Trade Mark, from 1/6 to 2,6 per dozen extra. Illustrated Catalogue on application.



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SOLUBLE FRUIT ESSENCES

AND ALL OTHER REQUISITES FOR THE MANUFACTURE OF HIGH-CLASS AERATED WATERS.

Agent for Galloway's Soda Water Machinery and Hassall's Phospho-Citric Acid. WRITE FOR PRICE

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VALLET'S PATENT IMPROVED

For Mineral Waters and Gaseous Liquids, Are now used by upwards of 1,000 Soda Water Manufacturers

in the United Kingdom. SAMPLES AND PRICES OF BOTTLES AND STOPPERS

ON APPLICATION,
Fig. 9. Boxwood Bottle Openers, polished
Ditto, fitted with indiarubber inside
Fig. 10. New Bottle Opener, fitted with rubber .. 8 6 per gross. .. 10/6

ROYALTY FREE.

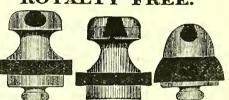


Fig. 7.

It will he seen by reference to figs. 6 and 7 that I now form a button or nut under the hase of my Stopper for the purpose of easily extracting same from the Bottle without spoiling or removing the indiarubber from the hody of the Stopper. This is readily accomplished by the use of a suitable tool made to fit on the nut; the Stopper being grasped in withdrawn from the bottle in a second, without injury to the Stopper. Therefore, it will be a great saving to Mineral Water Manufacturers, as by the old way of extracting the Stoppers from the Bottle, when necessary, very often the indiarubher is spoiled, and the time it takes by this slow process is worth more than the Bottle itself; so that in many instances Bottles with spoiled or dirty Stoppers are put aside as worthless stock.

Figs. 1 and 6 Stoppers, when invoiced without Bottles, are ready fitted with the rubber washer on, and are easily inserted into the Bottle by

Fig. 1 and 6 Stoppers, when invoiced without Bottles, are ready fitted with the rubher washer on, and are easily inserted into the Bottle by the simple pressure of the thumh, the washer at the same time folding in the hollow part of the stem, when passing into the Bottle. They are the only Stoppers which require no tool to fit into the Bottle; and when a Bottle hreaks, which seldom occurs, the Stoppers are always fitted with washer and ready to he inserted in a new Bottle. Therefore they are the most durable and inexpensive Stoppers in the Trade.

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It is well known that in the Spring or Summer the rich colour of Butter is derivable from the Marsh Marigold and Rannuculi (Butterenge) of our pastures, and it has been the aim of the Proprietors to produce an article that will enable the dairyman to Obtain uniformly the same results at all times of the year in the most agreeable form; and it is confidently believed that it will be found superior to every preparation in the proprietors of the purpose. Its perfect compatibility with oil and grease of every description (not watery compounds) makes it useful for many other purposes in which it is desired to obtain a rich and delicate golden tint.

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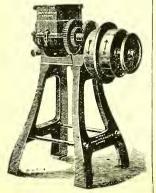
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Ginger Ale, Ginger Beer, and Lemonade, made from the following Essences, are unrivalled for their exquisitely fine flavour, and richness of aroma.

GUARANTEED TO BE THE FINEST IN THE

HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER,

A Pure Essence of the Finest Ginger, perfectly free from Capsicum. Highly adapted for the manufacture of Transparent Aerated Waters, and for all Dietetic, Medicinal, and Pharmaceutical purposes. Trade Price, 5 s. per lb.; 12 lbs. and upwards, 4s. 6d. per lb. Extra Fine and Strong, 5s. 6d. per lb.; 12 lbs. and upwards, 5s.

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Specially prepared for the manufacture of the very Finest Giuger Ale made, is an addition of Vanilla, Lemon, and other flavours to the above. It imparts, with the exquisite Ginger Aroma of the above mentioned Essence, a peculiarly fine fruity flavour, combined with the fullest amount of fragrance and pungency. Trade Price, 5s. 6d. per lb.; 12 lbs. and upwards, 5s. Extra Fine and Strong, 6s. per lb.; 12 lbs. and upwards, 5s. 6d. Quantity required, five fluid ozs. to each gallou of Syrup, making 106 10-oz. Bottles.

HAY'S GINGER ALE EXTRACT. FOR SECOND QUALITY GINGER ALE.

This Extract is strongly recommended for the manufacture of Ginger Ale, to which it imparts Pungency. Colouring, great Brilliancy, and an unusually Fine Ginger Flavour and Aroma, and makes a thoroughly good article. Trade Price, 4s. 6d. per lb.; 12 lbs. and upwards, 4s. Quantity required, three fluid ozs. to each gallon of Syrup, making 106 10-oz. Bottles.

HAY'S GINGER ALE ESSENCE. Highly Concentrated. FOR THIRD QUALITY GINGER ALE.

This Essence, which is a complete Bonquet of Flavours in a highly concentrated state, makes a Ginger Ale possessing an amount of aroma, flavour, and quality that will be sure to command a large sale, and that is unsurpassed by the so-called fluest Belfast Ginger Ale. Trade Price, 9s. per 1b.; 12 1bs. and upwards, 8s. 6d. Quantity required, half a fluid oz. to each gallon of Syrup, making 106 10-oz. Bottles, This Essence will be found most valuable to the general trade.

HAY'S GINGER CHAMPAGNE ESSENCE.

For the manufacture of Ginger Champagne. This Essence is a combination of the finest flavours, and imparts with the Ginger a most exquisite aroma, making a most delicious and refreshing approximation to Champagne. Trade Price, 8s. per lb.; 12 lbs. and upwards, 7s. 6d. per lb. Quantity required, ten fluid ozs. to each gallon of Syrup, making 106 10-oz. Bottles.

HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS.

A magnificent Preparation, perfectly soluble, and makes the finest Lemonade obtainable. Trade Price, 8s. 6d. per lb.; 12 lbs. and upwards, 8s. "Added in the proportion of one fluid oz. to each gallon of Syrup, the Soluble Esseuce imparts the most delicious flavour of the upwards, 8s. "Added in th Lemon."-The Chemists' Journal.

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Perfectly soluble. Trade Price, 5s. per lb.; 12 lbs. and upwards, 4s. 6d. Quantity required, one and a half fluid oz. to each gallon of Syrup, making 106 10-oz. bottles.

HAY'S TONIC ALE ESSENCE.

Tonic Ale made from this Essence is strongly recommended as a most agreeable, non-intoxicating, and appetising beverage, in the place of Bitter Beer. Trade Price, 6s. 6d. per lb.; 12 lbs. and upwards, 6s. Quantity required, five fluid ozs. to each gallon of Syrup, making 106 10-oz. bottles.

NOTE.—The above are specially recommended to manufacturers requiring the very finest Essences obtainable.

There is nothing in the market to equal them.

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The difference between a propagations made from the whore Escape and those made from the numerous spurious imita-

The difference between preparations made from the above Essences and those made from the numerous spurious imitations of the above, bearing the name of Soluble Essences, is most marked, and no manufacturer using the latter can compete with one using Hay's Preparations, as is universally known. The greatest care is used in packing for Export.



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W. HAY CAUTIONS THE TRADE against the use of those spurious so-called SOLUBLE ESSENCES which, besides having NO GINGER AROMA, are FLAVOURLESS, RANK, and DISAGREEABLE, and are little more than TINCTURES OF CAPSICUM.

ROYAL LETTERS PATENT. $\mathbf{B} \mathbf{Y}$

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TO SUPERSEDE CITRIC AND TARTARIC ACIDS FOR AERATED WATERS.

Is recommended by the most eminent Physicians in Great Britain. The Best Houses in the Trade have already adopted it. It is thoroughly beneficial, and far better suited to the requirements of the Mineral Water Trade; it is free from lead and all other minerals and cheap acids; it is fully £6 per cwt. cheaper than Citric Acid.

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THE PATENTEES CLAIM FOR IT, AMONGST OTHERS, THE FOLLOWING ADVANTAGES:-

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- 3. The price is only 10d. per lb. in 9 and 18 gallon casks; if in smaller quantities, 1s per lb.
- 4. It is now an established fact that the heverages made with this acid far excel all others in keeping properties, as there is not the fungoid growth that there is with other acids.

- 5. The Essences retain their strength to a greater degree.
- A thoroughly clear and pure beverage is obtained, whilst a greater "body" and more fruity character is imparted.
- Time and lahour saved. Being in liquid form, requires only to be measured and added direct.
- 8. It is entirely free from Sulphuri:, Hydrochloric, Nitrie, Acetic, or other cheap Acids.
- It does not affect the metal pipes to the same extent that Citric and Tartaric Acids do.

3-oz. Sample will be sent on receipt of postage (3 stamps), or 14 lbs. will be sent on approbation.

Extract from the "ANALYST," the medium of communication between Public Analysts, for September 1884-

CITBIC and tartaric acids have long been used for acidulating or giving to mineral waters their acid flavouring, but these acids have certain disadvantages, icasmuch as their solutions cannot be kept for any great length of time without the formation of a fungoid growth, and also the extreme difficulty of obtaining them free from lead. A solution has recently been offered to the trade called Phosphoric Citric Acid, the properties of which will no doubt interest Analysts. Poisonous metals were entirely absent, and so also were free sulphuric, hydrochloric, nitric, and acctic acids. The solution was clear and colourless. The quantity of phosphoric acid in a small bottle (half-pint) will amount to '95 grain, which I found to be the case in a sample of lemonade made with the above. The flavour and appearance were quite as good as that made with the organic acids. There is no reason why this article should not be used in this highly diluted form as the acid flavouring of lemonade and other mineral waters.

JAMES NAPIER'S REPORT, July 30, 1884.

JAMES NAPIER'S REPORT, July 30, 1884.

I examined samples for poisonous metals, especially arsenic, lead, and copper, but could not find the slightest trace. Free sulphuric, hydrochloric, nitric and acetic acids were also absent; indeed, no free acid exists but phosphoric and citric. From analysis and carreful examination, I am of opinion that, as an article to superior action of the same and the same article to superior of those acids. As is well known, it is almost an impossibility to obtain artaric and citric acids free from lead, so that this article, having no metallic contamination, is purer than those acids. I see no reason why the use of phosphoric acid, in a highly diluted form, will not prove beneficial and be much more superior to tartaric and citric acids. As phosphoric acid is a necessary constituent of the body, whilst tartaric and citric are entirely absent, it is certainly an advantage to use it, as it supplies a very important ingredient to the system and one which is too often obtained in insufficient quantities. The lemonade was entirely free from metallic contamination and fungoid growth, had a bright appearance, was particularly clear, and had a very agreeable flavour. I have no doubt but Phosphocitric Acid will be much used, as t is well suited for its intended purpose, i.e., to supersede citric and tartaric acids in mineral waters.

JAMES NAPIER, F.C.S., F.L.C., Public Analyst, London.

Dr. HASSALL'S REPORT.

The Analytical Sanitary Institution, 54 Holborn Viaduct, E.C., London, Having submitted to analysis a sample of Phospho-citric Acid, we find it to be entirely free from lead and other metallic impurities. Free sulphuric, hydrochloric, and acetic acids were also specially tested for, and found to be absent. The solution was clear, colourless, and, when sufficiently diluted, possessed an agreeable flavour. It is evident from the foregoing particulars that this preparation is well suited to supersede tartaric and citric acids, commonly employed in the manufacture of acidulated and aerated waters; while in its cheapness, freedom from metallic contamination, and in the circumstance that it would tend to preserve beverages made with it for a greater length of time (as there would be less tendency to the development of the fungoid growth frequently observed when the ordinary acids have been used), Phospho-citric Acid offers very considerable advantages.

ARTHUR HILL HASSALL, M.D.,

Author of "Food: its Adulterations and Methods for their Detection."

The aboveis so confirmed by EDWIN GODWY CLAYTON, F.C.S., &c., &c.

Professor JUSTUS VON LIEBIG,

Equally well known in England and Germany, says: Phosphoric Acid is a never-failing ingredient of all the organised structures of the animal body. The substance of muscular fibre, the fibriue of the blood, the pulmonary tissues, the liver and the kidneys contain an amount of phosphoric acid in chemical combination. The bones of the vertebrata contain more than half their weight of phosphates of lime and magnesia. The substance of the brain and the nerves contain phosphoric acid. The blood coutains under all circumstances a certain amount of phosphoric acid.

Dr. WILLIAM B. CARPENTER

Says: Phosphorous exists in combination with albuminoid compounds, and in all animal substances composed of these. The proportions of phosphorus in the brain is considerable, being from 8 to 18 parts in 1,000 of the whole mass, or from 1-20th to 1-30th of the whole solid master. It seems to be unusually deficient in the brains of idiots.

Gentlemen.—We have tried the Phospho-citric Acid and have much pleasure in pronouncing it a decided success. It is free from any objectionable flavour or taint, and being in liquid form is a great boon, as the time and trouble in weighing and dissolving the other acids is a consideration in the busy time. We consider all aerated-water makers will find it greatly to their advantage to adopt the use of it.—Yours sincerely, R. O'DONNELL& CO.

Gentlemen.—After fifteen months' continuous use of your acid we have much pleasure in testifying to its excellence. We find it possesses all the properties required by us for our trade, and is at the same time a great saving in time and expense.—Yours respectfully, R. MAYER & SONS.

2, 3, and 4 Rose Lane, London, August 18, 1835.

expense.—Yours respectfully, 16. MAYER & SONS.

Gentlemen,—We have now been using your Phospho-citric Acid over fourteen months, and have much pleasure in stating that we like it very mucn. It is certainly easier to work with than citric and much cheaper. We can find no fault whatever with it.—Yours truly, T. WATTS.

Catherine Street, Strand, May 7, 1885.

Gentlemen,—We have much pleasure in stating we have used your Phosphocitric Acid for several months, and find it a great improvement to the flavour of the lemonade, &c., also about 70s, per cwt. less than citric acid crystals. It is also a great boon in the saving of time, as it is always ready for instant use.—We are, yours respectfully, W. R. LISTER & CLEMOW.

Gentlemen,—I have now been using your Phospho-citric Acid for a considerable time, and have much pleasure in saying that it is the best and most economical article for the purpose I have met with. In my opinion it is far superior to the ordinary acids, producing a better beverage, and far easier to manipulate.—Yours truly, W. GLENDINNING.

truly, W. GLENDINNING.

Cathay, Bristol, August 12, 1885.

Gentlemen,—I have used your Phospho-citric Acid daily for the last ten months with a rapidly-increasing business, to the satisfaction of my customers and profit to myself, being only about half the cost of the other acids and ready for instant use; it gives me every satisfaction.—Yours respectfully, C. E. BEAVIS.

3 Sussex Street, Blyth, November 12, 1884.

Gentlemen,—I am happy to inform you that I have tried your Phospho-citric Acid, and I find it ouite as good as you represent it to he. It saves labour, and is little above half the price of citric and tartaric acids. The cask I ordered last week is to hand.—I remain, yours respectfully, THOMAS FORSTER.

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A Regenerator for Weakly Children, and for Debility in Adults; also in Ansemis,
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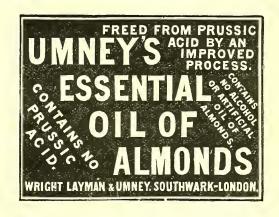
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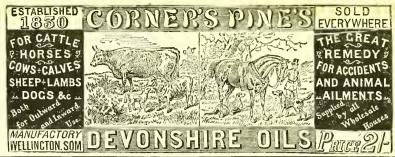
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CORNER'S FAMILY **EMBROCATION**

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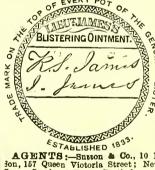
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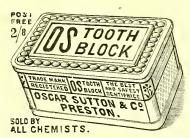
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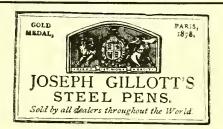
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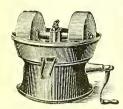
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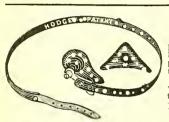


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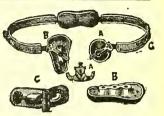


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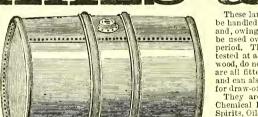
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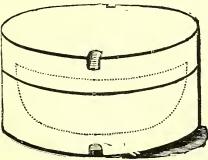
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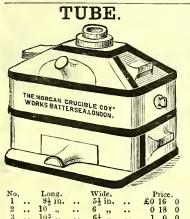
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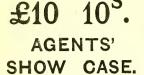


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